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A national organization dedicated to the advancement of the placement activities in schools and colleges, in business, industry and the professions generally, and to the coordination of the educational function with employer requirements, in cooperation with its constituent institutional membership.

In this issue

**WOMEN'S POSTWAR EMPLOYMENT OPPORTUNITIES
FRANCES WHITNEY**

MARCH, 1946

VOLUME 6

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WOMEN'S POSTWAR EMPLOYMENT OPPORTUNITIES

MISS FRANCES WHITNEY

Personnel Division, RCA Victor Division



During the war years, women made an important contribution to the production of materials, by taking over positions in fields where relatively few women had been employed before. Now that so many men are returning from the services, these women are faced with the prospect of losing some of the ground that they have gained during the war years in the field of industry and business. Miss Frances Whitney here analyzes the factors which will affect job opportunities for women, and the types of positions in which women will have the most opportunities in the future.

Miss Whitney received her A.B. degree from Mount Holyoke College. After several years of teaching and secretarial work, she joined the Staff of the Babson Statistical Organization, Wellesley Hills, as assistant to the head of the Labor Department. She was, for seven years, the Executive Secretary of the Consumers' League of Cincinnati, and later became Assistant Director of the Ohio State Employment Service.

Early in 1943 Miss Whitney came to RCA Victor Division as a specialist on Women Personnel and Staff Assistant in Personnel Research. She is a member of the Women's Industrial Conference, sponsored by the Philadelphia Chamber of Commerce and Board of Trade.

IT is universally recognized that the increased number of women in the total working force in this country during the period of war production was one of the most important factors in our tremendous output of war materials. From many quarters has come recognition of the contribution made by the more than eighteen million women who put their shoulders to the wheel. These women worked at a variety of occupations, on some of which their employment constituted a minor revolution. The U. S. Department of Labor reported that during World War II, at least 1,050 out of a total of 1500 industrial occupations could be competently filled by women with the proper aptitudes, training and skills. Women were prepared for many of these jobs, formerly held only by men, by courses offered at colleges, universities and technical schools, or by short, intensive training given within the walls of the establishments where they worked.

While these women were assuming new responsibilities on the production front, their sisters were serving with the Armed Forces. Many of the some 128,000 WACS, WAVES, MARINES and SPARS who have returned to civilian life have increased their employability

through new types of experience. Some will have re-employment rights with their former employers; others entered the Service without previous work experience, fresh from school or college, but with a good educational grounding. All of them, as they turn toward civilian pursuits, will have definite skills to offer.

Let us grant at the outset that not all of the women enrolled in the Armed Forces or added to our business and industrial working force since 1941 are looking forward to postwar paid employment. Some who changed the pattern of their lives because of the urge of patriotism or the demands of economic necessity have chosen and have been able to return full-time to their home responsibilities. Others, and their number is proportional to the size of the casualty lists, have no such choice. They must look for and accept whatever jobs they can find in order to support themselves, their temporarily or permanently disabled ex-service husbands, their children and other dependent members of their families. Still others will be seeking an opportunity to use the abilities which employers have called upon gladly during recent years, and to take part as individuals in the world of busi-



NBC'S TRIO OF WOMEN ENGINEERS IN A STUDIO CONTROL ROOM

ness competition, regardless of their sex. Such women look forward to the right jobs to provide the same sense of satisfaction which men get from individual accomplishment.

Other Factors Than Qualifications Affect Job Opportunities

Whatever the urge driving women to look for jobs, it is evident that their chances of finding employment depend to a large extent on other factors than individual qualifications. Foremost among these factors is the question of whether or not our economy as a whole reaches and maintains a level of full employment. Unless, after the economic situation "jells", business, home and industry need a working force much greater than the forty and a quarter million indicated by the 1940 census

(about thirteen million of whom were women), there will be fewer jobs for both men and women. Should this happen, the chances for the employment of an increased proportion of women seem slim.

The probability is, however, that our employed population will be stabilized at a figure considerably above the 1940 level, because of the production volume called for by the pent-up demand for goods and services resulting from war-time shortages, the improved products which manufacturers will soon be able to release for civilian consumption, and the need for supplying war-stricken countries all over the world with the necessities of life. With *man* power depleted by war losses, *woman* power may be needed not only on the jobs traditionally known as women's, but also

in some of those newer fields where women have proved their ability under the stress of war.

Some of the other factors tending either to increase or decrease employment opportunities for women are: the types of jobs on which men demobilized from the Armed Forces are placed; the extent to which plants employing women on war jobs made engineering adjustments to increase women's efficiency, and have retained those mechanical improvements because they have increased the productivity of both men and women; the seniority status attained by women employed on war production, or by women enrolled in some branch of the Services; the availability of training to equip women for new types of work; the de-

velopment of a tendency to establish rates of pay, especially for hourly workers, based upon the job rather than upon sex; the degree of expansion in industries engaged in the kind of work which women do best, and the demand for workers in industries which in past years have employed a large proportion of women. Then, too, fewer women may be seeking jobs if prevailing wage rates are sufficiently high to enable men to support their wives and families adequately without additional income.

To just what extent and in what particular types of occupations the interplay of these and other factors may affect the proportion of employed women is an unanswerable question at this moment. It seems likely, however, that there will be a continuation of the upward



ENGINEER EXPLAINS DESIGN OF SPECIAL PURPOSE ACORN TUBE TO ENGINEERING AIDE .

trend in the percentage of women in the labor force evident in census reports for the fifty years from 1890 to 1940, and that a major portion of this increase will be on types of jobs at which women have been notably successful, and in industries and lines of business which have used women in considerable numbers over a period of time.

Jobs on Which Women's Success is Widely Recognized

Regardless of reconversion difficulties, there is a steady demand for girls and women with good clerical and stenographic training and experience; for the dietitian, the home economist and the restaurant hostess; for the librarian, the teacher, the social worker, the woman trained for opinion or market research, and for the woman with a bent toward the distribution field—be it from the purchasing, selling or advertising angle. With the notable exception of department stores and specialty shops, the number of women who have risen to positions of responsibility in the processes of distribution is relatively limited. But more and more women are invading this area of employment, and the expansion of both domestic and foreign markets should increase their number. Among women with such interests, as well as among girls just released from the Services, there may be adventurous souls eager to set up their own businesses for the first time. After all, as they know, a good many women have made a living as their own bosses for years. In these days of uncertainty and strenuous competition, however, it may be the part of wisdom for women to expand their knowledge of products, services, markets and business management on some one else's payroll until the times are riper than at present for individual business ventures.

In industrial establishments, management knows by experience that many women are "naturals" for types of work requiring attention to detail, dexterity and patience—a fact

demonstrated also by their record as clerical workers and telephone operators. During pre-war years, and increasingly in the processes of war production, jobs such as assembling, soldering, inspection, light machine operation, wrapping and packing have been done chiefly by women. The girl who accurately and rapidly interlaced the spaghetti wiring back of a bomber instrument panel, or assembled, with a minimum of shrinkage, units of a proximity time fuse has an aptitude which the electrical industry needs in producing radios for the civilian market.

On the face of it, semi-skilled jobs such as these may not sound very promising to girls about to embark on their working careers. To the girl predominantly interested in people, however, and looking forward to personnel work, employment as an hourly worker in a factory is an excellent stepping-stone. There is no surer means of learning what personnel problems are than to associate with co-workers on the job, to share in their efforts to bargain collectively for improved working conditions and a better standard of living, and to have to get along with the hard-boiled sort of wage earner one has never met socially, as well as with the foreman who must turn out production willy-nilly, regardless of the temperaments and abilities of those he supervises.

Some Newer Opportunities

Lifelong students of labor-management problems have reached the conclusion that among all the factors which may affect worker morale and productivity, satisfactory human relations is the most important. If industry and business are guided by this conclusion, the years ahead will see increased emphasis on the counseling of employees at all levels—from errand boys to department heads, by the staff of personnel departments. Women with a knowledge of psychology and of testing techniques, supplemented by experience on the production line, and with a capacity for mak-

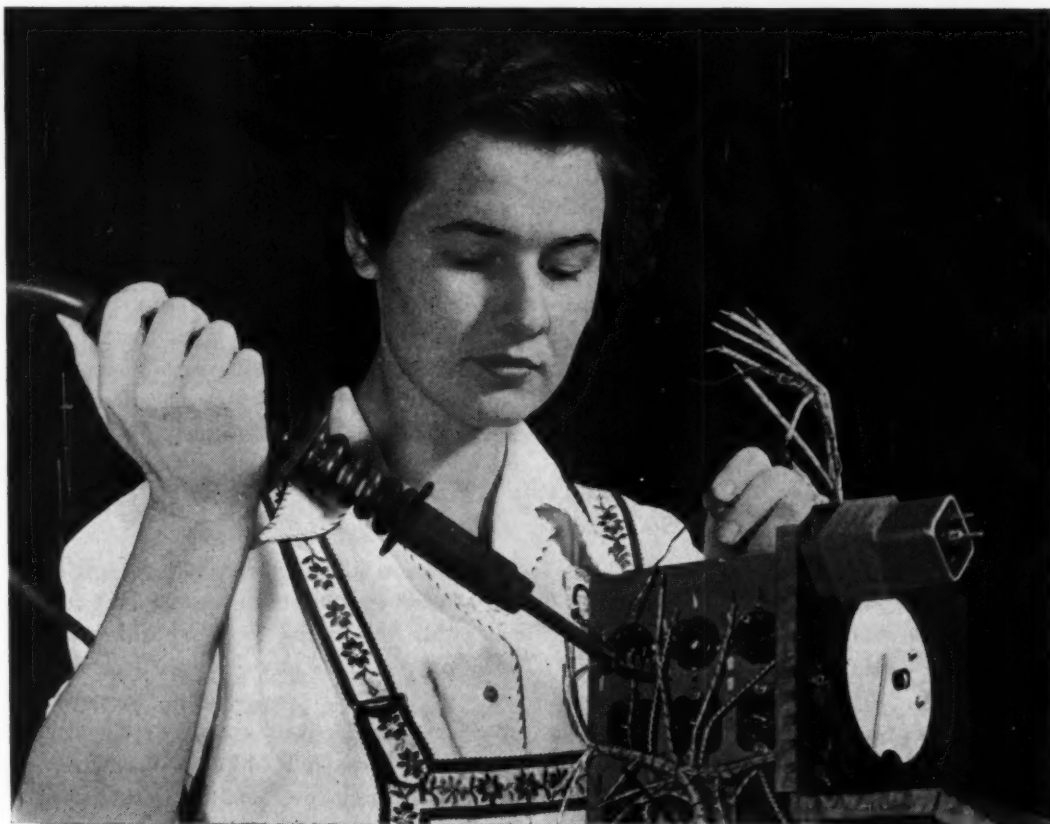
ing friends, should be especially qualified for this type of service, particularly in establishments where a considerable proportion of the employees are women.

Even before the mounting demand for war materials and the draining off of men for military service made imperative the employment of women on jobs previously ear-marked for men, some women had found out-of-the-ordinary job niches. Dependent always on individual qualifications and ambition, as well as on management's receptivity toward employing women in these capacities, the numbers of such openings were naturally increased by war-time conditions.

The National Broadcasting Company, for instance, is now employing three women engi-

neers—the first women to be used by any radio network to put studio broadcasts on the air. All three of these women have had courses in radio production. One holds an engineering degree. They were promoted to their present positions after three or four months of apprenticeship.

In line with a policy of filling vacancies from within the organization, NBC employees who started as messengers, pages, mimeograph operators or secretaries are now serving as studio managers, script writers, engineer apprentices and sales representatives. A diversified training program offered by the company has made such advancement possible for those beginners willing to "learn to walk before they can run."



SOLDERING WIRES IN COMMUNICATION EQUIPMENT

Inevitably, industry lost more and more of its highly trained engineers to military and other government service as the war progressed. At the same time, young men completing university engineering courses were being drafted. The need for engineering personnel became so acute that several corporations, including the RCA Victor Division of the Radio Corporation of America, offered intensive courses in special branches of engineering to carefully selected girls. It was planned that girls so taught over a period of ten months would be used as engineering aides, working with quality control, design and development engineers, and becoming increasingly skilled, through experience, in dealing with engineering problems.

In situations where these aides have been most intelligently oriented on their jobs, and assigned to work for which they were equipped, under the right conditions, their performance has been commended by RCA Victor supervisors. The result of this war-induced experiment may be some degree of increased employment for women seriously interested in jobs requiring an engineering and scientific background. While there have been individual instances in which scientifically trained women have reached eminent positions in the business world, the student majoring in chemistry or physics has found little use for her knowledge industrially except in a research laboratory. There may be women, as there are men, who prefer to apply their scientific skill to the problems of production rather than to pure research.

On a job closely related to that of engineering aide—drafting, women trained as replacements for men have given a good account of themselves. This is in line with women's usual aptitude for work involving carefulness about details. Here is a field in which there seems to be expanding opportunity for women artistically and mechanically inclined. Two other areas in which an increased number

of women might be used to the advantage of management are accounting and cost estimating.

It should be kept in mind also that new types of jobs may open up for women in greater numbers *outside* than *inside* industry. After all, slightly less than one fourth of our gainfully employed workers were employed in industrial establishments in 1940. The whole field of service occupations is due for expansion, and along new lines. Here is an area on which returning male veterans have less claim than women, and in which women may find interesting and satisfying work.

Criticisms Women Must Consider

It has been possible to give only an overview of the types of jobs on which women are likely to find post-war employment. Certain factors which may influence the volume and variety of these jobs have been mentioned. There is another element in the situation which is of greater importance to women than all the others—the question of whether or not employers will *want* to employ women in increased numbers and in new capacities (provided they can get along without them). You ask—why shouldn't they? Here are some of the answers management gives to this question, on the basis of experience. Women may not be willing to accept the accusations made, but they should at least attempt to disprove them as employees, if they expect to gain the recognition and advancement to which they feel their abilities entitle them.

Employers say that women trade on their sex—expect special privileges and treatment—don't turn out a full day's work for a full day's pay. Furthermore, women lack knowledge of industrial organization, mechanical processes, management and production methods. They are inflexible, emotionally unstable, take things personally. There's no use promoting them to important executive positions, because, the first thing you know, they

will get married and quit, or they won't consider a transfer to some other operating location because they can't leave their husbands and their homes. They refuse to accept the full responsibility a job entails, especially for errors or mistakes of judgment. Just out of school or college, where they may have been Home-Coming Queens, they expect to be placed immediately on lucrative and important jobs—are impatient of apprenticeship and of instruction by experienced people to whom they feel superior.

Perhaps some of these charges are rationalizations on the part of men who still feel that woman's place is in the home, and who resent the intrusion of women on lines of activity which they consider exclusively masculine. Perhaps some men might also be accused of malingering, inflexibility and an undue sense of their own importance. Perhaps some employers are a bit defensive about their personnel policies, and do not always place women on the jobs they are best qualified to do, or promote them when they deserve it. But, without doubt, some women are guilty on these various counts, and because women are

a minority group in business and industry, their shortcomings stand out.

As they begin their working lives, women should realize that each employed woman stands not just for herself as an employee, but for all employed women. Recognizing that responsibility, each woman should seek the type of employment for which she is best qualified, and give her best efforts to that job. At the same time she should be preparing herself for advancement through planned study, and through publicizing her abilities. Even though she lives the double life of home-maker and wage-earner, she should balance her personal responsibilities against the demands of her work, if she is seriously interested in a business career. She should so conduct herself in her relations with fellow-workers that she is respected as well as liked.

The greater the number of employed women who look upon their jobs in this responsible and ambitious fashion, the greater will be the number of women getting better and better jobs—and keeping such jobs with a sense of job satisfaction.



PLACEMENT OF SURPLUS WAR EMPLOYEES

FACED with the necessity of cutbacks in personnel, Douglas Aircraft Company, Inc., Santa Monica, Calif., has begun an experiment in placement of executive and administrative employees in jobs with other companies.

Demobilization of this personnel is being aided at Douglas by an inter-company employee referral plan which works like this: Douglas circularizes major national business and manufacturing concerns, particularly those ready to resume (or expand) operations, inviting them to file with Douglas information concerning jobs available for experienced administrators and other pertinent data. Douglas will attempt to refer to the companies employees who will fill requirements and who are due to be released by the aircraft producer. The rest is left up to the outside company and the recommended employee.

—Business Week, 8/25/45.

THE BACTERIOLOGIST IN INDUSTRY

DR. CARL S. PEDERSON

Professor of Bacteriology, Cornell University

Although everyone realizes the importance of bacteriology in the field of medicine, very few students, when considering the opportunities in this highly specialized field, realize what an important part bacteriology plays in many of our industries. Dr. Pederson, as Director of the Employment Bureau, Society of American Bacteriologists, has had an opportunity to observe some of the needs for bacteriologists in various industrial concerns.

Dr. Pederson is a graduate of the University of Wisconsin, 1924, and received his M.S. in 1925. He came to the Experiment Station in Geneva, New York, in that year, and enrolled at Cornell University where he obtained his Ph.D. degree in 1929. He was appointed a professor in 1931. Dr. Pederson has cooperated with industry in many studies, and is the author of numerous papers dealing with the bacteria of fermentation, physiology of bacteria, sauerkraut, pickles, cheese and coffee fermentation, processing of tomato products and fruit juices.

ON numerous occasions I have been asked by high school students as well as college students about the opportunities one may find in the field of science and, more particularly, bacteriology. Many of these students have had a natural aptitude for science, but an equal number have not and would be far more successful in some other work.

The average high school student has had a smattering of science in his courses in chemistry, physics and biology, and to a few the field is so interesting that they wish to continue their scientific studies. Rarely have such students had enough training to acquaint them with bacteriology as a science and thus to have some understanding of its opportunities. Some few have been intrigued by the marvelous works of Pasteur, Koch, Lister and others and, therefore, desire to become bacteriologists, but they usually consider the field in relation to medicine. Seldom do any of them realize that bacteriology plays a very important part in many of our industries and that there is a real need for well trained bacteriologists in industry. Microorganisms are not only useful but necessary in life, and the number of species involved in beneficial processes far exceeds those few pathogenic species causing some of our illnesses.

To obtain the clearest understanding of the opportunities in the science we must first have a better knowledge as to the industries employing bacteriologists. We shall not even con-

sider those students that remain in colleges and universities to carry out teaching and research programs.

Just as there are more individuals interested in medical bacteriology, so also are there more employed in industries preparing the various substances to combat diseases. The problems involved in curing our ills and overcoming the effects of various disease microorganisms are being studied not only in our various colleges and medical schools but also in many of the large chemical and drug manufacturing firms. They are not only producing the penicillin, sulfa drugs, and similar products, which have received so much publicity of late, but they have produced and still are producing the various vaccines, antitoxins and chemicals so important to us. The manufacturers of such products not only require continued control of the products to insure their efficiency but also much research to improve their use.

Microorganisms are an absolute necessity in life. They rid the surface of our earth of all dead matter that would otherwise accumulate and make much of this available for new plant growth. In the growth of legume crops, bacterial nodules are produced upon the roots which ultimately increase the fertility of the soil. Commercial sale of these cultures is an established industry.

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and others, are produced by the action of microorganisms and others, such as bread, depend upon the growth of yeasts to produce their firm texture. Wines, beers, and distilled liquors have been produced by fermentation for centuries. In all these industries individuals with knowledge of bacteriology, usually with a good training in chemistry, are essential.

Lately, industrial alcohol, glycerine, acetone, butyl alcohol, various organic acids and a host of other organic chemicals have been manufactured by, or as a result of, fermentation processes. The course of these fermentations depends upon rigid control. The presence of certain undesirable organisms may result in reduced yields and even total failure to attain the desired product. The field of organic chemical production is relatively new, and much research is required.

Bacteria are important in the textile industry, particularly in retting flax. They play an important part in coffee and tea fermentation, and in sugar deterioration. The control of bacteria is essential in the tanning of leather.

The food industry revolves around the control of microorganisms. The milk industry, particularly, has seen a need for careful control in pasteurization procedure, and nearly all large cities have bacteriologists to control the quality of the milk supply. Likewise, the larger cheese companies follow the same control, as well as a research program. The canning industry, fruit, vegetables, fish, meat, or other products, depends upon the killing of microorganisms, and the larger concerns, particularly the meat packers, have at least one control, as well as research bacteriologists.

In these industries, as well as large numbers of related industries, their research and con-

trol problems may be cared for by technical chemists and bacteriologists who have other duties.

At present, industrial concerns, as well as public health officials, are becoming more aware of faulty sanitary practices as used in various industries. New compounds are being developed to help clean equipment, and much testing and research is required. At present, there are few bacteriologists properly trained in chemistry and physics with a sound technical knowledge to carry on an effective research program in this field.

Bacteria are now used in the determination of certain vitamins and amino acids, those essential elements in our diet. The development of these methods in analysis of foods may be a new entry for bacteriologists in the food industry.

Bacteriology is applied biology based upon a good training in basic sciences, chemistry, physics and others. It is impossible to become a good bacteriologist without a sound foundation in basic sciences. However, there are various levels in any science. The sub-professional worker, one who titrates solution, prepares materials, fills ampoules, is an extremely important individual in the progress of the science and actually may become a more thorough technician than the professional worker. Such technical or sub-professional positions can often be filled by a student with a good high school education, although it is preferable to have some training in college.

However, without a more thorough knowl-

edge of the field, obtainable only by a sound basic training in the basic sciences, one cannot expect to reach the higher level of the professional group. The control chemist or bacteriologist may have had sufficient training by completing work for a bachelor's degree but to be capable of taking charge of a research program higher training, usually leading to a doctor's degree, is desirable.

The field of research attracts many young men and women. However, the true prospective research worker should be motivated by a desire to find out why certain changes occur in nature. He must realize that he will never be properly financially repaid for this knowledge and work. He must be rewarded by the satisfaction of having added to our scientific knowledge and thus having made this a better world in which to live.

Many of our large industrial companies have that appreciation of research and have set up a research staff, realizing full well much of the work will be a financial loss to them. However, they also feel that some little part of their research program may ultimately result in a new product or an advancement of science.

Many of the individuals become so valuable to the concern in their broad understanding of the problems that they are asked to take, or are placed in, executive positions of one type or another. Some others often are asked to assume such responsibilities but are so deeply interested in their research work and its more scientific aspects that they would rather sacrifice financial reward for their love of science.



INDUSTRIES PLEDGE JOBS FOR VETS

A CHICAGO organization called *Industry for Veterans, Inc.*, is seeking pledges of positions for returning servicemen. It has already lined up 435 firms in 16 states. These firms, which employ a total of 500,000 wage-earners, have promised that they will attempt to maintain a minimum of 25 per cent of their post-war positions for veterans.

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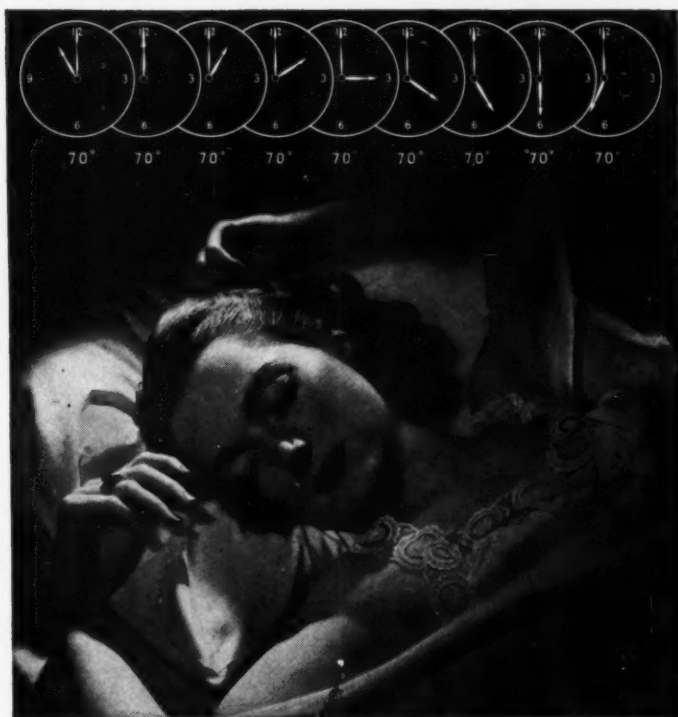


It may seem a bit unusual...

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RECRUITING SECONDARY SCHOOL STUDENTS FOR PREPARATION FOR TEACHING

L. E. PERRY

Acting Superintendent of Schools, Mt. Lebanon, Pittsburgh

The following report on an experiment to alleviate the growing shortage of teachers for grade schools and high schools was delivered by Mr. Perry at the annual meeting of the Pennsylvania Institutional Teacher Placement Association, which was held on November 20, 1945, in Harrisburg, Pennsylvania.

The techniques used by Dr. Herlinger, Superintendent of Schools, Mount Lebanon, Pittsburgh, whom Mr. Perry was representing, could be used with success in almost any secondary school. Since a student's success in college or in business and industry depends so much on the foundation of knowledge he receives in secondary school, the problem of the increasing shortage of teachers is of utmost importance to everyone.

THE thought which is today on everybody's mind, and the word which is on everyone's tongue is "RECONVERSION". In the home, in the church, in industry, and in the schools the focus of attention is on the follow-up of the post-war planning which was so much in vogue a year ago.

But the first step in reconversion is the taking of stock; taking stock of ourselves, taking stock of others, and taking stock of the situation generally; or making what an Army G-2 would call an "estimate of the situation."

Something over two years ago when Dr. Herlinger, Superintendent of Schools, along with many others was taking stock of the future prospects of teacher supply, he came to the very obvious though not at all original conclusion that the shortage of trained teachers was not a problem which was produced exclusively by war-time conditions, which would be eliminated by the return to the classroom of those who had left for duty with the Armed Forces. On the contrary there was apparent, even then, the prospect that for the next four, five, or perhaps even ten years there would be a considerable shortage of well-trained teachers as a result of retirement from teaching by war-time emergency replacements, the competition of lucrative industrial employment in the anticipated period of post-war economic prosperity, and the war-time and post-war birth-rate increases.

In order to make his contribution to the

solution of this problem, Dr. Herlinger conceived and initiated an experiment in selective recruitment of teacher-training prospects in the Mt. Lebanon Senior High School. The philosophy, the method, and the results of that initial experiment were reported by him in the November 1944 issue of the *Bucknell Journal of Education* in an article titled "An Experiment in Teacher Recruitment." The same article appeared in the December 1944 issue of *Occupations* under the title "And Gladly Teach." On the assumption that the majority of those present have gained some familiarity with the original experiment through these articles, I shall refrain from any lengthy discussion of it. As a background for the discussion of later developments, however, I believe it would be helpful to review for you the conclusions derived from the initial effort and published in the cited reports. They are as follows:

1. The best of our girl students graduating from high school can be interested in teaching as a profession if the profession can be presented to them in an impartial and intelligent manner.
2. The administrator who is charged with the selection and recommendation of teachers to the Board of Education must take an active and interested part in the program.
3. The cooperation of all teachers in a school system, and particularly of a selected

group directly charged with the responsibility of conducting the experiment, must be carefully thought out and planned.

4. The program of guidance must be definite and well organized.

5. The objective of quality rather than quantity must be clearly kept in mind.

Based on these conclusions and the experience of the first year of the experiment, the following procedure was followed during the school year of 1944-45:

1. A permanent committee of teachers was appointed to act as a guidance committee for teacher recruitment.

2. Teacher recruitment was made a part of the guidance program starting in the 10th grade. An attempt was made in the 10th and 11th grades to find those students interested in teaching and to encourage the right ones to consider the teaching field and also to dis-

courage those who probably should go into other fields. This was done more by informal exploitation of appropriate guidance opportunities than by formalized propaganda-pressure methods.

3. The superintendent of schools met with all senior girls of the Mt. Lebanon High School and talked to them about teaching as a profession. He spoke of the present shortage of teachers and the likelihood of a continued shortage for four or five years, the varied possibilities within the general field of teaching, the preparation required, the rewards (financial and otherwise), the drawbacks, the matter of certification, etc. He also answered numerous questions asked by the students.

4. Later the Teacher Recruitment Committee asked that all interested in further discussion attend a second meeting. Twenty-seven girls indicated such an interest. The counselor and members of the committee had indi-

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vidual and group conferences with these girls discussing such things as grade levels or subjects in which the girl was interested, educational requirements, teacher training institutions, etc. At this time the suggestion was made that arrangements be made for girls to visit teachers in other buildings.

5. Some days later each girl was given a brief questionnaire which furnished the committee with certain needed information. Twenty girls indicated that they had definitely decided to become teachers or were seriously considering doing so. Three others said they were playing with the idea.

6. The counselor furnished information from which it was learned that all but one seemed to be promising material so far as the ability was concerned. Seventeen ranked in the upper fourth of the class. Four ranked below the upper half but three of these had other qualifications to recommend them. (Later one of these suggested that she probably would not make a successful teacher. At last report she was considering social service. One other girl reluctantly gave up the idea of teaching but finally seemed to see that she probably would do something else better since she found learning from books difficult.)

7. Each girl was given help in getting information about teacher training in the institution she was considering.

8. During the second semester each of these girls took a day to visit one of the teachers in the elementary schools or junior high school. The principal made the assignments and each girl spent an entire day with the teacher arriving before the children and remaining until after dismissal. The group had previously met with the committee and had been given some suggestions about what to look for in the rooms visited. After these visits each girl in individual conference with a member of the committee discussed what she had observed and asked any questions that had occurred to

her. Then each wrote a summary of her impressions. In general, the reports (oral and written) were very enthusiastic and all of the girls with the two exceptions already noted found their inclinations toward teaching strengthened by their visits.

9. It was intended that those interested in grade levels other than those visited should make a second visit but a number of circumstances delayed this until it was so late that the girls were reluctant to miss their own classes. Consideration was given to the possibility of giving the girls other experiences such as assisting high school teachers with certain work but the members of the committee were not convinced that such activity would really be valuable, since they would emphasize what are frequently thought of as penalties and would not give experience in lasting rewards. It is significant that the written reports indicated that one of the aspects of teaching which is most attractive is the pupil-teacher relationship, which obviously would be lacking in the type of work which it would be feasible to assign to such neophytes.

Of the original twenty-seven girls who initially manifested an interest, twenty are now attending colleges where training in their particular subjects or fields is available. Two are interested in art, two in music, two in physical education, one in home economics, one in library, four in kindergarten and primary grades, four in elementary grades, and the rest in high school subjects. Schools being attended include Slippery Rock, Pennsylvania College for Women, Ohio Wesleyan University, Pennsylvania State College, Oberlin, Wilson, Denison, Muskingum, Miami, Carnegie Institute of Technology, University of Pittsburgh, Bucknell, Grove City, Syracuse, and Capital University.

The program for the current year has already been launched and will follow essentially the same procedure as that of last year.

It will be noted that during the first two years of this project the program was aimed exclusively at the girls of the High School. The reasons for this limitation while the war was still in progress were both realistic and obvious. This year, however, with a radical change in horizons for high school boys, the program has been broadened to include qualified boys in the scope of its appeal. When the initial meeting was held this year all members of the Senior Class attended. This meeting was convened and conducted by the chairman of the Faculty Teacher Recruitment Committee who presented in turn the High School Principal and the Acting Superintendent for their respective parts of the program.

If response can be predicted on the basis of apparent interest, there is every reason to anticipate this year's results to be comparable to those of the two previous years.

At the beginning of the third year of this significant experiment, there appears to be no reason to alter the conclusions published by Dr. Herlinger at the end of its first year. What I have given you here today is a brief resume of the plan and a progress report as of the beginning of the third year of trial. It is fondly to be hoped that when the next progress report is in order, it can be given in person by the author and founder of the plan himself.

—Reprinted from the Annual Report of the Pennsylvania Institutional Teacher Placement Association.



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VOCATIONAL GUIDANCE AND PLACEMENT IN NEW YORK CITY'S BIG BROTHER MOVEMENT



RUSSELL J. FORNWALT, *Vocational Counsellor*

Mr. Fornwalt, who has been in charge of vocational counseling for the Big Brother Movement since June, 1943, was graduated from Lafayette College in 1934, and received his M.E. degree from Pennsylvania State College in 1938. He also did graduate work at Lehigh University between 1935 and 1938. Until the time of his appointment to his present position, he was Instructor in Occupations and Guidance Director of Wilson High School in Easton, Penna.

As Vocational Counselor, Mr. Fornwalt interviews boys with respect to their educational and vocational interests, places them on jobs, farms and in various schools, gives tests, makes research studies in guidance. He is, at the present time, developing a vocational library and school and college information service, and also working on a program of scholarship aid for boys.

IN THE Big Brother Movement we are finding that vocational guidance and placement are important steps in the rehabilitation of so-called problem boys. If we can get them thinking, planning and acting along vocational lines, many of their delinquent tendencies will diminish or disappear entirely.

Our organization, which was founded in 1904 by a church men's club in New York City, works essentially with two types of boys: (1) delinquents and (2) pre-delinquents. The first group consists of boys who have already become involved in some difficulty, such as breaking and entering, truancy, stealing, and so forth. The second consists of boys who are not in any particular difficulty but whose home conditions and general environment are conducive to delinquency.

Frequently boys are referred to us because they are either without one or both parents or are without proper parental guidance and supervision.

The Big Brother Movement primarily serves boys between the ages of ten and 16. However, we continue to work with them after they have passed their sixteenth birthday. In fact, approximately 100 of the more than 800 former "little brothers" who were or still are in the armed forces have called at our vocational office to take advantage of our guid-

ance and placement service. During the war we made every effort to keep in touch with these older boys and to advise them of our employment department's efforts in their behalf.

Boys come to us from a number of sources in New York City. The greatest percentage is from the Children's Courts. Others are referred by the public schools, churches, social and welfare agencies, families and individuals.

In addition to vocational guidance and employment our help for a boy may include any or all of the following:

(1) *Big Brother guidance and supervision.* The "Big Brother" is a volunteer business or professional man, carefully selected and approved by our Membership Committee. He agrees to take a personal interest in one boy, meeting with him more or less regularly, and assisting our professional staff in carrying out its program of social, physical, moral and educational development, especially designed to meet the individual needs of the boy concerned. Our professional staff consists of field counsellors, club and camp directors, and a vocational counsellor.

(2) *Membership* in one of the neighborhood clubs for boys sponsored by the Big Brother Movement.

(3) *Two weeks' attendance* at our own



THIS BOY AND HIS "BIG BROTHER" HAVE MANY SIMILAR INTERESTS, INCLUDING "CAREERS." THE "BIG BROTHER" IS A VOLUNTEER BUSINESS MAN WHO AGREES TO TAKE AN INTEREST IN ONE BOY

camp or at one of the several camps with which we cooperate during the Summer months.

(4) *Placement assistance.* When deemed advisable the organization recommends placement of the boy in an institution or home outside of the City. Arrangements for such placements are usually made by a member of the staff.

(5) *Leisure time guidance.* Suggestions from staff members as to how the boy can more profitably make use of his spare time—in addition to camp and club privileges. Trips to museums, radio broadcasts, rodeos, circuses, ball games, etc., are regular features of our leisure time guidance program.

(6) *Health service.* At least once a year

each boy is given a thorough physical examination. All physical defects or deficiencies are noted on each boy's individual health chart. Such remedial measures or treatment needed are carried out under the supervision of our examining physician.

In addition to the above, there are many kinds of indirect assistance made possible by close active cooperation with other private and public health and welfare agencies in the City.

No charge is made for any of the services of the Big Brother Movement. Our work is supported by a great many individuals who contribute small amounts and supplemented by grants from a few Foundations.

Our guidance and placement service is in-

tended mainly for boys over 14 years of age. Usually at 14 they are about to enter high school and require guidance in choosing courses of study. Also, at that age they are eligible for part time working papers for certain types of after-school employment.

Boys are referred to the vocational department by their "Big Brothers," field counselors or parents. Results of guidance and placement interviews are recorded on cumulative personal cards especially designed for the Big Brother Movement.

There is no clear-cut distinction between our guidance and placement activities. Because of the types of boys with whom we are working, it is necessary to provide considerable guidance before recommending them

to employers. It should be noted, however, that we do not work with abnormal boys. Our boys are normal, physically and mentally, in every respect. They become delinquent simply because they give the "normal" reactions to the "abnormal" conditions in which they are required to live. Boys requiring special psychiatric or clinical attention are referred to agencies adequately qualified to handle such cases.

The first step in our counselling process is to help the boy form a vocational objective. In a study of over 400 boys made recently by the Big Brother Movement, we found vocational objectives or the lack of them to be quite significant in boys' behavior.

Among boys with vocational objectives we



A PART TIME JOB ENABLES THIS BOY TO GET FIRST-HAND KNOWLEDGE ABOUT HIS VOCATIONAL OBJECTIVE. As a PAGE BOY WITH A BROADCASTING COMPANY HE CAN LEARN ABOUT RADIO FROM THE BOTTOM UP

noticed less truancy than among boys having no occupational goals. When they have some idea as to where they are headed vocationally, school routine is more meaningful and less irksome. Generally speaking, boys with career aims are more adjusted to school, having better scholarship and attendance records.

Evidence also shows that boys with vocational objectives are less in need of leisure time guidance than those without aims. Boys with objectives usually have hobbies or leisure time interests that are closely related to their vocational ambitions.

We have also found that boys with vocational objectives usually adjust better to part time jobs and summer employment than do boys lacking in objectives. The latter are more likely to be interested in what a job pays rather than what it offers in the way of opportunity. The former are more apt to remain on the job for a longer period of time.

Boys with vocational objectives usually show more cooperation in getting working papers and complying with other employment regulations. They can generally be counted on to keep appointments and to report back after interviews with prospective employers.

To arouse vocational interests and to help boys establish occupational goals, we use the following methods: (1) vocational interest tests or inventories, (2) part time jobs, summer jobs and farm placements, (3) assignments of boys to "Big Brothers" having similar hobbies and interests, (4) occupational literature.

We use interest tests to help boys discover the general field (not the one single occupation) in which their vocational interests lie. One type of test measures the degree in which a boy is academically, commercially or technically inclined. It is done by a carefully worked out series of questions on popular and everyday things like magazines, books, famous people, current events, occupations and hobbies.

When combined with school marks and results of intelligence, aptitude and personality tests, which we also give from time to time, the vocational interest inventory is a rather reliable guidepost to a boy's occupational capabilities. It is not enough, of course, to consider likes and dislikes alone because more than interest is required to be successful in most occupations.

Results of the interest inventory pave the way for suggestions on the part of the vocational counsellor as to what books or pamphlets the boy might read to learn more about the vocations in which he is interested—and suggestions as to the types of part time and Summer jobs the boy might secure in order to profit vocationally.

During the past two years we have developed a rather complete library of occupational outlines, briefs and monographs. It has been our experience that material in outline and summary form is more likely to be read and studied thoroughly than the more lengthy books. Also, we find it to be more economical from the standpoint of both money and space to keep an outline and pamphlet file up-to-date. We do not allow material to be taken from our vocational library. If we think that boys can profit by having certain monographs or pamphlets, we give them copies free of charge.

Our library also contains the catalogues and bulletins of more than 500 public and private schools, colleges and other educational institutions in New York City and State. This information is used extensively in counselling with boys, parents, Big Brothers and veterans. We are now in the process of developing a program of scholarship aid in order to help deserving boys secure special training. Our aim is not only to help boys form objectives but also to aid them in every way possible to reach their goals.

Our job finding facilities are designed to meet the individual needs of two types of

boys: (1) those going to school and wanting or needing part time employment; (2) those no longer attending school and desiring full time employment.

In all cases we endeavor to place boys on jobs that are as closely related to their vocational ambitions as possible. If it can be arranged, we will place the boy wanting to be a pharmacist in a drug store, the boy interested in journalism in a newspaper plant, the mechanically inclined boy in an automobile repair shop, and so on.

We strive to make every placement for the younger boy a real vocational experience rather than simply a money making opportunity. We do not encourage school boys to work part time, if we think that it will interfere with their school progress. We point out to boys that their main job is school and getting themselves adequately prepared for future employment.

Our greatest challenge these days is with the boy who wants to quit school as soon as he becomes 16 years of age. He knows that he can get a good paying job now without being a high school graduate. Often he refuses to consider a job that might lead to something worthwhile because it involves running errands.

Our vocational department locates openings for boys by a variety of methods. We learn of numerous jobs through "Big Brothers" who in many instances hold key positions in

business and industry. From time to time we send letters and cards to prospective employers, advising them of our placement facilities. Also, we follow the help wanted ads in the daily newspapers and cooperate with many public and private employment services in New York City. During the past few years we have had at least five times as many requisitions for boys from employers as we have been able to fill. Of course, all employment services experienced a similar situation.

Employers are most willing to accept referrals from us. In fact, we have had many businessmen tell us that they derive great satisfaction from helping to rehabilitate some maladjusted boy. We have a number of employers who are ready at all times to employ a boy whom they have never seen in order that he might be eligible for parole from some institution.

When referring boys for jobs, it is our policy to "place the cards on the table" with regard to the boy's background and problems. We find that this works to the advantage of the boy and helps to establish greater good will between ourselves and employers.

The employer who understands a boy's needs and problems can do a remarkable piece of social reconstruction. Our job, as we see it, is to take the boy as he is, with the qualities that he has, and get him started on worthwhile objectives. Often the very qualities, such as aggressiveness, ingenuity,

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imagination and cleverness, that now get him into trouble may later help to make him a successful businessman, mechanic or inventor.

Preparing boys for interviews with prospective employers requires a lot of time and guidance. We place great emphasis upon personal appearance, speech, promptness and courtesy. We stress the importance of complying with regulations for getting working papers.

We make the matter of introducing a boy to an employer a business-like procedure. In the case of most of our 14 and 15 year olds, getting a job is a new and strange experience. To help smooth the way for the boy, we make a definite appointment for him with the prospective employer. We also give the boy a card of introduction, indicating whom he is to see, when and where. This card, which we ask the employer to mail back to us, has a space where results of the referral can be checked.

We also give another card to the boy which we ask him to fill out and return. We want the boy to have a definite responsibility in the follow-up process. If he fails to secure the first job to which we send him, we urge the boy to report back to our office in order that we can be of further help.

After we have placed a boy on a job we follow his progress without giving him the impression that we are unduly trailing him. Every so often we telephone his employer on "routine business" both for the purpose of keeping our contact alive and to inquire about

the boy. Our field counsellors have opportunity to talk with the boy's parents since they visit his home once or twice a month.

Most important of all, we encourage the boy himself to keep us advised as to how things are going. We ask him to bring his job difficulties to us.

Another feature of our placement service is the securing of farm jobs for boys who desire to spend all or part of the summer in the country. In this respect we are cooperating with the United States Employment Service and numerous county agents throughout the Eastern States.

Each month we are devoting more time to the counselling of veterans. We are making available to them all the guidance and placement facilities that we have for the younger boys. Many veterans went directly from school to the service and have had little or no experience in job-getting. We are giving them assistance in answering employment ads and writing letters of application. We are helping them discover their vocational assets.

Working constantly toward a boy's total vocational adjustment, our interest in him usually continues for many years. Always making each boy feel that he is our only concern, we try to maintain just as friendly and helpful a relationship, without being over-protective, as possible. For many a mal-adjusted boy, the vocational objective seems more worthwhile, if he feels that he has a friend for whom it is worthwhile to make good. That is the *Big Brother* idea.



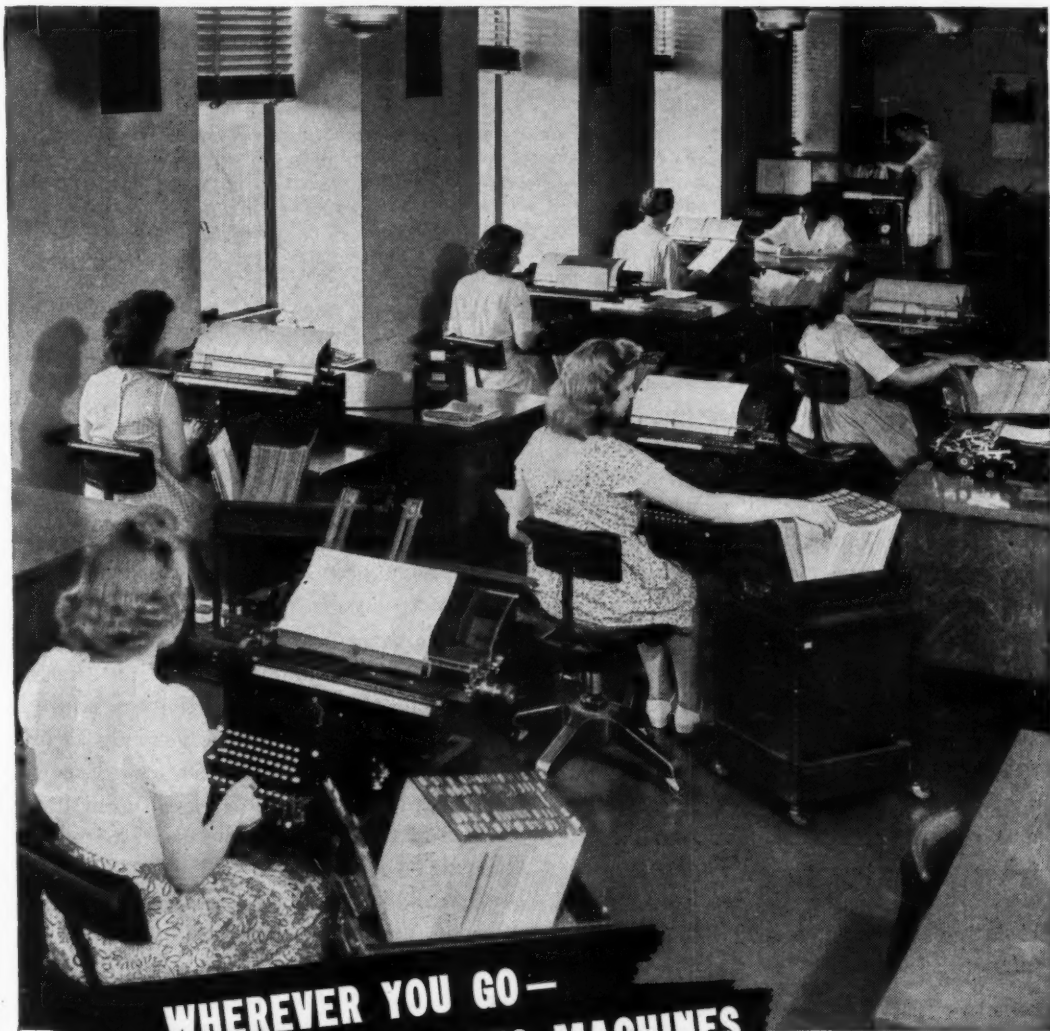
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SOLDIERS in England awaiting redeployment home are receiving practical lessons in their trades or professions through a program of refresher training courses and on the job experience.

The American Army's educational division, in co-operation with the British government, has developed a project to enable soldiers to train within civilian agencies in London. The men are placed in positions with British workers in their particular field, and see at first hand how the job is done in England.

Courses varying from three weeks to three months are being run in 275 centers in Britain. British firms have co-operated with enthusiasm and the program has improved greatly the morale of the men taking part in it.

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ENGINEERING—TODAY AND TOMORROW



CARL J. ECKHARDT, JR., *Professor of Mechanical Engineering,
The University of Texas*

Among the many fields of specialized knowledge, engineering offers one of the brightest futures for young men and women with ability and training. Mr. Eckhardt, in addition to being a professor of mechanical engineering, is Chairman of the Committee on Student Selection and Guidance of the Engineer's Counsel for Professional Development. In this position, he has had the opportunity to study extensively the qualifications necessary for success in this field.

Mr. Eckhardt is Chairman of the South Texas Section of the American Society of Mechanical Engineers, and a member of Sigma Xi, Tau Beta Pi, Pi Tau Sigma, and the Society for the Promotion of Engineering Education.

THE term *engineering* has been defined as "The art and science by which the properties of matter and the sources of power found in nature are made useful to man in structures, in machines, in services, and in manufactured products."

In order to fulfill his obligation to society, the engineer uses his skill and knowledge to improve the character of the food which we eat, the clothing which we wear, the shelters by which we are protected, the systems by means of which we travel, the methods by which we communicate, and countless other factors upon which the enduring satisfactions of our modern world depend. In short, the engineer has assumed the responsibility of conceiving the means by which the well being of man may be improved while at the same time relieving him to a greater extent of the drudgery of toil.

Rare indeed have been the occasions upon which proper time has been taken by historians to reflect upon the true significance of the work of such engineers as Leonardo da Vinci, James Watt, Rudolf Diesel, Thomas Alva Edison and a great host of others too numerous to mention here. Yet such individuals directed by the force of an original genius have engaged in scientific research for the improvement of modern civilization. The fruition of their ideas has enlarged the re-

sources and increased the power of man. In every true sense of the word they and many thousands of other engineers of lesser prominence have been significant benefactors of the world.

All engineers deal with the laws of nature which are fixed and infallible. The breadth of the scope of engineering activity is so great that work of this character is generally segregated into types which permit more specific references to be made. All types of engineering endeavor may not be discussed here. An effort will be made to describe briefly a few of the oldest types of engineering work. Although the fundamental background for all such phases is the same, the specialized knowledge for each type is in a measure different.

Chemical Engineering

The *Chemical Engineer* develops the means of converting natural resources into finished products by the use of chemical processes. The career of this type of engineer lies to a very great extent in manufacturing establishments. He employs his intimate knowledge of chemical reactions and physical changes to convert crude materials into finished products. Such processes are usually conceived upon a very small scale in a laboratory as unit operations in various combinations. Then a pilot plant is constructed to demonstrate the economic

feasibility of combining such unit operations in a particular pattern to evolve the process desired. The proven process is next adapted to the conditions which prevail in industrial enterprises for the purpose of making the manufactured product available in sufficient abundance to meet the needs and requirements of the consumers. The work of this type of engineer leads him into fields which involve the preparation of foods, paper, petroleum, rubber, leather, glass, steel, non-ferrous metals, water, beverages, textiles, paints and dyes, munitions, fertilizers, and many other products.

The chemical engineer has brought into existence such materials as butadiene, acrylonitrile, silicones, adhesive resins, indium, and uranium. He has developed such processes as polymerization, coagulation, dehydration, electrolytic dissociation and a legion of others. The future of this type of engineer appears to be very promising. He will produce materials which have been scarce heretofore. Just as magnesium is produced from sea water and fertilizers are produced with the use of nitrogen obtained from the air, so will the chemical engineer devise the means of producing seriously needed new materials. He will combine materials in some cases and disassociate them in others. He will convert the commonplace materials into new forms with ever greater usefulness.

Modern catalytic cracking processes demonstrate conclusively the ability of this type of engineer to rearrange the atoms to form molecules of a desirable nature in the case of oil refining operations. Studies of the atomic structures and nuclear matter have already produced results which have altered the thinking processes of the entire world. Experiences of the past support the belief that the world stands today at the threshold of a revolutionary progress in chemical engineering. The conventional behavior of man may,

in fact, be altered materially by developments made by this type of engineer.

Civil Engineering

The *Civil Engineer* is a great benefactor of all the people who compose our modern civilization, for he determines the boundaries of all tracts of land and builds highways, harbors, canals, dams, tunnels, the structures of buildings, bridges, water purification and distribution systems, as well as sewage treatment and disposal systems. This type of engineer controls the flow of water to the sea in order that land may be irrigated, floods may be prevented, and power may be generated with hydraulic devices. He makes possible the concentration of large masses of people by controlling their sanitary environment. In building railroads, highways, canals, tunnels, harbors, and bridges, this type of engineer expedites the transportation of people and

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every nature of material. His knowledge of the strength of materials enables him to design and build structures both large and small which carry every conceivable manner of load. The work of this type of engineer is so closely related to the public welfare that a very large number of civil engineers are employed by municipal, county, state, and national governments.

It is exceedingly difficult to visualize a modern civilization without structures. The result of the work of the civil engineer may be observed in the case of Empire State Building, Boulder Dam, the Panama Canal, the Tennessee Valley Authority's flood control system, the San Francisco Bay Bridge, Holland and Lincoln Tunnels under the Hudson River, and many other structures of note throughout the world. As further progress is made and populations grow denser, such work must of necessity grow more significant and important.

The health of the people of any land depends upon the careful and intelligent application of well established sanitary data. A great and humane field of service may be rendered by the engineer who strives to reduce the incidence of communicable diseases and the blight cast upon human happiness by the operations in which man engages in the absence of legitimate sanitary codes. Withering pestilence and ravaging diseases may in many cases be averted. An engineer embracing such a work derives a tremendous satisfaction in averting human misery and is never without a strong motivating impulse.

The field of hydraulics, even though great progress has already been made, challenges the abilities of engineers interested in the flow of fluids in general and water in particular. In this work the engineers control the natural flows of bodies of water in some cases. In other instances artificial flows of water are created to serve important purposes. Without such operations there would be a serious re-

trogression in the progress of modern civilization. Even though civil engineering is the oldest branch of engineering, its work remains dynamic, romantic and exceedingly useful.

Electrical Engineering

As his name implies, the *Electrical Engineer* deals primarily with matters which relate to the generation and utilization of electrical energy. Such engineers are frequently segregated into two groups. One group conceives, designs, manufactures, and operates devices of a more rugged nature which are normally associated with the light and power industry. Common among the devices employed are generators, motors, transformers, heaters, electrical appliances, and lighting devices. The preponderant portion of the total power generated is consumed by such devices. The second group of electrical engineers concerns itself with problems which relate to devices consuming much smaller amounts of power, but their work is equally as important. Telephones and telegraph systems, the radio, television, the X-ray, radar, and electronic devices fall within the sphere of this engineer's activities.

The future holds great promise for engineers who can conceive of the means of converting kinetic energy into electrical energy in a more efficacious manner. Hydrogen cooling of generators has begun to point the way for improving power plant performance. High voltages have already been employed in transmitting electrical energy over great distances, but the room for improvement in the design of transformers and distribution systems is still great. Electrical equipment of every name and nature may be designed to effect better economies combined with greater safety and reliability. The character and effectiveness of telephonic and telegraphic communication can and should still be greatly improved. The average citizen lacks to a very great extent the

capacity to appreciate the fact that countless applications of electronic devices can be made to perform services better and more effectively than they are now being performed. Such devices are particularly useful in inspecting, counting, measuring, controlling, selecting, and many other operations. The radio is as yet in its infancy. It will in the future be used upon an even more extended scale to break down the barriers which have separated the peoples of the world from antiquity.

A better understanding is being obtained of many of life's experiences by the use of electrical devices such as the X-ray by means of which it is possible to make explorations not possible to the unaided eye. Radar, a great development of our generation, sends out short pulses of radio energy and locates objects which cannot be seen. Just as it has been used in time of war to assist in military navigation and firing operations, so will it be used in time of peace to render safe all types of travel. It detects objects, measures distances, determines direction, speed, and altitude. The heritage of the young electrical engineer is rich. His possibilities for the future are great and attractive.

Mechanical Engineering

The *Mechanical Engineer* draws upon nature's store of potential energy, changes it in kind and quality and employs it to operate machines. The current generation is living in a Machine Age created by this type of engineer who deals with refrigeration, air conditioning, heating and ventilation, power plants, internal combustion engines, machine design, industrial management, transportation, manufacturing, and many other pursuits. The future holds great promise for engineers who apply refrigeration by new processes to the preservation of food which retains its optimum qualities and flavor. Human comfort heretofore regarded as luxurious will be pro-

vided in the interests of preserving health, increasing productivity, and alleviating the discomforts of man engaged in his varied pursuits. From antiquity man's body has not been capable of carrying out the concepts of his mind. The mechanical engineer's generation of power has been a factor of tremendous importance in the improvement of man's standards of living. The production of power by the use of new working substances and by the use of old working substances involving new cycles of operation offer opportunities which stretch the imagination.

The development of new types of prime movers such as the gas turbine and jet propulsion motors challenge engineering skill and abilities. Great improvements can yet be made in the case of internal combustion engines designed for vehicles, marine applications, and aircraft. Transportation systems will be operated in the future with greater speed, comfort and security. Manufacturing processes will be revolutionized further to increase the productivity of man and to shorten his working hours. Industrial enterprises will bring within the financial reach of an ever increasing number of families the devices by which domestic life is improved and made more attractive.

Mining Engineering

The *Mining Engineer* assumes the responsibility of locating and mining petroleum,

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natural gas, coal, metallic ores, and non-metallic materials. He devises the means of transporting through vast underground networks oil, gas, and their derivatives. He taps nature's storehouse of minerals both commonplace and rare. In some instances his work is conducted deep under the surface of the earth. Upon occasion, he develops immense deposits of materials in open pits at the surface. In still other cases materials of great value are recovered from the floors of streams, lakes and oceans. This engineer's work is located at points where deposits of desired materials are found.

In the years which lie ahead, new scientific methods of prospecting for oil and gas will be developed in order that exploration costs may be reduced. Oil pools will be discovered at greater depths and in such inaccessible places as the costal margins. Processes must be devised to render nil the wasteful and extravagant procedures which have been employed in the past. Natural resources of every type must be conserved to protect the welfare of the nation.

The less admirable solid fuels must be brought into greater use in order to preserve and project as far into the future as possible the more admirable types of coal. Liquid fuels will, no doubt, be manufactured from solid fuels. Shales, which now lie dormant, will be made to yield their heat liberating potential. Processes will be devised to carbonize the lower rank solid fuels.

Engineers skilled in metallurgical pursuits will continue to extract metals from ores and to refine the metals extracted. Modern processes require metallic members capable of withstanding exceedingly high pressures and temperatures. Modern machines make necessary the development of metals which are light yet possess great strength. The need for metals which successfully withstand ero-

sion and corrosion is great. By combining different metals, alloys are obtained. These materials can be blended in such a fashion as to provide endless patterns of properties and qualities.

The value of the mineral products produced annually in the United States gives evidence of the nation's prolific productivity. The mining engineer plays a very prominent part in this phase of the nation's productivity. His work has always appeared attractive to a host of engineers who have acquitted themselves in such a fashion as to improve the welfare of their native land.

The success of a young man who selects engineering as a life's work will depend upon the following factors:

1. Fortright honesty
2. A thirst for knowledge
3. Imagination of conception
4. Determination and perseverance
5. Accuracy of thought
6. Hard work
7. Ingeniousness
8. Capacity for sound judgment
9. A good personality
10. Aptitude for leadership

The principal motivating impulse of a young man who selects engineering as a life's work, namely, that of being successful in engineering pursuits, should be accompanied by other impulses. He should strive to improve his moral, ethical and spiritual qualities in order that he may hope to be an intelligent citizen and a capable leader. His animation must stem from a sincere and an inherent desire to make a substantial contribution to the improvement of the social order in which he lives. The rewards, remuneration, and satisfactions which he may derive from engineering work are commensurate with his ability to promote the common welfare.



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BELL TELEPHONE SYSTEM



A PERSONNEL PROGRAM FOR A GREAT MOVEMENT



HAROLD F. POTE, *Director of Division of Personnel,
Boy Scouts of America*

Mr. Pote has had a wide background in Scouting, beginning as a volunteer in 1917 with a Scoutmastership under the Des Moines Council, Iowa, of which state he is a native. After war service in the artillery and another period as Scoutmaster he entered Scouting professionally in 1922, becoming the Scout Executive of the Sedalia, Missouri, Council, from which he entered the staff of Region 8, as Deputy Regional Executive, for the states of Missouri, Iowa, Nebraska, Kansas, Colorado, and Wyoming.

In the autumn of 1924 he was selected as Regional Executive of Scout Region 10, which position he held until selected as Personnel Director on September 1st, 1930. He is a graduate of Simpson College and had had postgraduate law studies at the University of Southern California. He serves as a member of the Board of Trustees of his college.

HOW many men are there in Scouting? This is a question most frequently asked of anyone related to the Personnel Division of the National Council, Boy Scouts of America. When the answer is given (now above 460,000), surprise is expressed and the next question is immediate—What do they do? They serve 1,500,000 boys or more correctly they *guide* these boys and young men through their Scouting experience. The Scout method provides that boys (patrol leaders working under competent Unit leadership) guide boys.

For about twenty years the Boy Scout Movement has had an expanding Personnel program. It has been built around four very simple words—Select, Inform, Guide, Inspire.

Select—Select to a predetermined standard. Recruit to that standard.

Inform—Simple job specifications. Simple informative statements covering each position must be furnished.

Guide—Guidance for each position must be specific, continuous and “on the job.”

Inspire—A task well done and openly recognized by associates is the best inspiration.

Volunteer Guidance

The Volunteers in Scouting have been led to seek special training guidance on the job. In a Movement which is essentially Volunteer, guidance work must be desired and proceed

from education in what is best for youth and for the men serving youth. No pronouncements, orders, regulations or procedures can be effective until Key Scouters recognize leadership needs and willingly accept responsibility for a specific program designed to improve that leadership.

Special guidance tools including very specific job and performance essentials and measurements have been offered to every Local Council. (541 locally chartered units covering America) Institutions sponsoring Troops, Cub Packs, and Senior Units (about 60,000) are furnished these “Select, Inform, Guide and Inspire” tools. There are training sessions for all leaders so that each man who guides youth and those responsible for his selection and guidance may know what is required and how to supplement natural ability and provide techniques.

An annual certification of all leaders gives the Local and National Councils an opportunity to point out leadership weakness and grade up that leadership. These annual opportunities are especially emphasized and all Scouters, at least technically, must show justification for such certification. A strengthening of leadership all along the line is the result.

Exploration

True Scouting involves exploring by all

participating, both men and boys. Each Troop, Cub Pack or Senior Unit has leaders who have special bents, hobbies or abilities. These men offer to the boys under their leadership both through the troop and patrol activities and through the Merit Badge Program excellent opportunities for exploration and encouragement and guidance through that exploration. The Merit Badge Program now covers 114 different subjects. The truly inspiring story of what this special exploration of Sea Scouts (Senior Units) meant to the U. S. Navy has been told by naval officers and thousands of letters from former Sea Scouts: "My Sea Scout work gave me a special edge and all my naval assignments were made easy because of this training" was a very common report.

Professional Service

Less than one half of one percent of our Scouters are paid leaders or career men. As this is being written, there is a total of 2,020 members of the Professional Service of the Movement. These men represent the full-time executive personnel — nationally, regionally and locally employed. Each man is, in the broadest sense, an administrator of the Scouting program. While there are a few specialists, such as those related to specific program promotion, the great majority are related to the establishment and servicing of local Units. This involves recruiting of leaders and the training of that leadership.

These professional men are a very highly selected group. They come for the most part from the fields of business and school administration, while some have come directly into Scouting from college. With few exceptions they have had experience as Scouts and as Volunteers.

National Training School for the Professional Service

All new men are required to take special training before they can qualify. There is

maintained, near Morristown, New Jersey, special facilities which make it possible to conduct periodic 30 and 45 day training schools for new men in the Profession. The center is known as the Schiff Scout Reservation. This year, a two-week advanced course has been added to the training program. This is open only to returning veterans who had previously been employed as professionals. Some have called this training at the Schiff Reservation, a special orientation course in the Profession. It is more than that. It is a preview of the job of the professional leader and of all the techniques which are available to him as he serves boys through the hundreds of volunteers with whom he is to work. In these schools, National Staff members who are responsible for various phases of the program are the instructors and always have available the very latest information and tools for the guidance of the candidates.

In-Service Training

All new Professional men are trained from one to two years "on their first job." The In-Service Training program is a program of "on the job" training of all new professional men. While these men are at the National Training School, their background is carefully reviewed and their abilities analyzed. Special assignments are then given each through his Scout Executive who accepts responsibility for the training. In other words, the Scout Executive agrees as a part of the employment arrangements, to give special guidance and training and supplement his new Field Executive in those things which are deemed to be essential. The progress of each man is reviewed from time to time and assignments adjusted as the need arises. With careful direction this program guarantees a growing profession.

College Cultivation

We follow our young men through college. For the past ten years the Division of Person-



THE MAIN LODGE OF SCHIFF SCOUT RESERVATION, THE BOY SCOUTS NATIONAL TRAINING CENTER

nel has had a College Cultivation program. This program has been limited during the war years. As Scouts left their home communities for their respective Colleges, their Scout Executives transmitted their names to the Personnel Division. An active list was developed for each of the Colleges and periodic communications were sent to these young men. Where possible College Deans and campus leaders were furnished copies of these lists. Thousands of these young men have asked for help in selecting college courses. A small percentage were interested in becoming Professionals later, but the majority were merely following through and keeping up their Scouting contacts and interests. Many of these young men formed the nucleus of Alpha Phi Omega chapters, a Service Fraternity open to

Scouts now organized on about 100 College campuses.

This College Cultivation program has paid great dividends in sustaining interest and building up the leadership of the Movement.

Re-Induction of Veterans

Former Professionals are entitled to a further opportunity in their chosen career. At the outset of the war period, there were 1393 members of the Professional Service. As previously indicated, there are now in excess of 2,000. 674 of our professional family entered military service. Each of these 674 men had letters from us throughout the war period. The Personnel Division Staff also corresponded with each man's employer so that on August 1st last, we were able to report to the

National Executive Board that 414 of the 674 men were planning to return to the Professional positions. We were also able to report that we had in excess of 300 positions for these men, even though the Professional Service had been expanded by about 30% during the five-year war period.

To date, 178 of these men have returned and have been reemployed; about 50% of them in their old positions. In each case, there has been a very careful review of their present capacities, including training during the war period and adjustments have been made as a result of that review. These men have returned with an average annual salary increase of more than \$500.00. 70 additional men are at present negotiating through the Personnel Division for proper placement. There are still 200 vacancies available.

The National Executive Board provided for a special Re-Induction Fund with which to cover the costs of advanced training for each of these veterans, free of charge. Free round-trip transportation from the veteran's home community is also provided and each man is eligible to take anyone of 7 scheduled two-week courses at the Schiff Reservation during the year 1946. In a few instances, (approximately 10%), the right position is not available for men upon their discharge from the military service. In such cases, the Re-Induction Fund can be used to provide an interim position for a period up to 6 months pending a permanent position. This whole program has been enthusiastically received by the men themselves, by their friends and by local Council officials who have likewise provided special funds.



MEMEBERS OF THE FIRST ADVANCED SCHOOL FOR RETURNING VETERANS, HELD AT SCHIFF SCOUT RESERVATION

Veterans Interested in Service

There are numerous Volunteer tasks for the returning Veteran. Literally thousands of letters have been sent to us by former Scouts and their leaders from every zone of military activity throughout the war period. These letters have expressed appreciation for the special training which Scouting had given them. But more important, practically all of them made definite commitments to serve Scouting upon their return home. While there were times in the war period when the securing of the right leadership was next to impossible, this interest of returning veterans has already changed that picture and while we are holding firm to the men who carried the leadership responsibilities during the war, we are encouraging local Councils to fill minor positions with returning veterans and give them a chance to gain experience for a greater service in the years to come.

The correspondence involved in keeping up contact with these thousands of fine men has been exacting, but most inspiring.

As these young men return, they tell us that, first of all, they want to get re-acquainted with the home situation, and they want to relax a bit before finding their proper job. They then seek employment. After this is done, then they are anxious to find some spot where they can render special service on the home front. Scouting provides this opportunity. We will continue to offer them all assistance.

All of the foregoing pictures in the briefest possible form the direction and content of the Division of Personnel's attempt to meet Personnel responsibilities.

We will continue to build an expanding Personnel program for our great Movement. In many respects we are pioneering. In many respects we are only partially effective. In the main, there is much satisfaction for those who were responsible for the establishment of the Personnel Service and much more satisfaction for those who have helped develop "Personnel Administration in Scouting."



TRAINING EXECUTIVES IN FACTORY OPERATION

LOOKING to the future and the need for thoroughly trained executives, one company is starting from "the ground up" to assure itself that its management will be in competent hands. The company is the Coleman Company, Wichita, Kansas, and the plan is to select college graduate engineers and give them a "postgraduate" course in practical factory operation.

Each year two to four men, graduate engineers of the Kansas State College and the University of Kansas, are chosen by company executives. The first year, these men work in the factory on actual production. This work is done in four departments which have a diversity of operations, so that the graduates can obtain experience on all general types of factory production. In addition, during this first year each graduate completes a course in modern business from an approved correspondence school. The cost of the course is taken care of by the company.

If the first year is satisfactory, both to the student and to the company, the student starts the second year in the company offices, working in several different departments, including purchasing, scheduling, production engineering, industrial engineering, cost, and so forth. During the last three months he spends most of his time in the department where he has shown the greatest aptitude.

The graduate has two additional tasks to fulfill in the second year—he must read and make a written report once a month on an article in some important trade magazine, and he must enroll in a public speaking course and complete it satisfactorily.

At the conclusion of the second year, the graduate is moved into a regular job with the company, and from there on is on his own.

—Factory Management and Maintenance, 9/45.



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THE VETERAN GOES TO HIGH SCHOOL

A SYMPOSIUM

Of all the problems confronting our public school systems, none is of more importance than providing for the educational needs of returned servicemen and women, and released war workers. The coming years will bring about important changes in the ways of living of a great many people. Returning veterans will require training for new jobs in industry which require increased and more varied skills. The service of the public schools, to adults as well as young people, is becoming increasingly important. We are publishing herewith, reports on how four public school systems, scattered over the country, are meeting the changing conditions in the field of secondary education.

SEATTLE

EDNA L. STERLING

Director of the Language Arts, Seattle Public Schools, Seattle, Washington

THE Seattle Public School system has had a keen realization, for a great many years, of the part which both the public schools and the community play in the preparation of young people for the adult world which they are entering. For the last fifteen years, they have likewise been equally alert to the requirements of adults for new or continued training. This awareness has been active on the part of the Board of Education, the Superintendent's Conference, the Curriculum Council, and the classroom teachers. The Board of Education and the administration have evinced their understanding of this problem especially through the Edison Vocation School and by a constructive program of manual and applied arts throughout the junior and senior high schools. The Curriculum Council, composed of directors of the various areas represented in the schools, believe that school is living and that learning comes with and from experience. A course of study issued in 1938 by the Social Studies committee bore the title

Living Today Learning for Tomorrow

Classrooms in Seattle from the kindergarten through grade twelve are accustomed to look-

ing at both sides of a question. Now let us consider these situations in detail.

Thomas A. Edison Vocational School*, established in 1930, is a school that has grown out of the practical needs of the work-a-day world. Its teachers are skilled and experienced workmen, drawn from the trades they teach, who reproduce for their students as nearly as possible the conditions existing on the job. Before any trade or skill is taught, committees of employers and workers have met and have talked over the capacity of the trade to use more trained workers and the need which certain of the present workers have for further training. Based on the findings of this group, a limited number of students are admitted to a class. These students are not enrolled because they have failed in other studies or are dissatisfied with other training. Quite the contrary, they are admitted only because they display some particular fitness for the trade, as demonstrated by their school records, by their natural aptitudes, and by their eagerness to learn.

Once in the school, the student finds that his teachers are maintaining the closest relationship with the shops or factories of each trade or industry. He is spurred on in his work by this sense of reality that attaches to his training. He observes that students who are graduated promptly find their way into em-

*The information used here is from a report prepared in 1938 and issued by Samuel E. Fleming, at that time Assistant Superintendent of Schools in Seattle.

ployment in the line for which they are trained.

The student is further helped to do his best by the realization that the school has an efficient placement bureau, which is constantly on the lookout for jobs for the graduates of the school, and that the school itself is interested in him and his work after he leaves school. He notices at once that this school is different from any other of which he has heard, for it does not give him a diploma when he leaves school. He likes the school all the better because he must work for six months, making his living at this trade, to prove his worth before he receives a diploma.

The men in organized labor like the Edison School method because they are consulted as to its policies. They know that Edison will not suddenly at graduation time flood their trade with far more workers than the trade can employ. They know many of the teachers as members of their own trades and unions, and they meet graduates of Edison as associates in union labor.

The employer who is using Edison-trained workers is quite as well pleased with the school as the student and organized labor. Perplexed because applicants for jobs lack specific training in a trade and too busy to train them himself, the employer turns with great relief to graduates of Edison because he knows from experience that he will immediately find workers who have a sound elementary training in all aspects of their jobs. Employers are not only glad to employ Edison graduates, but they not infrequently send partly trained workers to Edison to complete their training.

Vocational education in Seattle is not expected to be substitute for high-school experience. High-school graduates are well represented in the student body of Edison. In 1938, about 70 per cent of the trade and 97 per cent of the advanced business training students were high school graduates. Vocational

education thus tends to be above the high school level. High schools, occupational adjustment, and adult education are under the same administration direction. There is no competition among these divisions. In the judgment of the Board of Education, general education, as represented by the high-school program, should not, in the interests of competent citizenship, be sacrificed to occupational proficiency. Rather does general education become the foundation of the latter.

The Seattle policy is selective rather than extensive. The Board of Education proposes to provide only those vocational offerings which can meet local employment as demonstrated through careful surveys of occupational needs. The Board does not propose to train in excess of the employment market.

Edison Vocational School serves a wide range of needs and, therefore, has a varied clientele. The age ranges from 16 to 60 and the school background from grade eight to college graduation. The large and varied clientele is enrolled in fifteen day-trade preparatory courses, eight part-time courses, and thirty-nine evening-school trade extension courses. By far the largest group is served by the Evening School Trade Extension classes, which offer four hours of instruction per week and are scheduled from Monday through Friday for a term of eight months.

The purpose of such classes is to extend the preparation of men and women already at work. A beauty parlor operator may attend to learn the latest techniques of hair styling; a building tradesman to improve his skill in blue print reading; a machinist to learn to manipulate some machine he does not use at his work.

The Day-Trade Preparatory classes train beginners in the basic skills and knowledge essential for entrance to employment in a vocation. Also available are part-time classes for students who cannot devote full time to attendance. A part-time program is also

available in Business Training and Apprentice Classes.

As a result of the war, Edison Vocational School established a training center for the Merchant War Shipping Administration. Since 1940, 910 men have been trained as cooks and bakers for the Administration. In addition to the training given these men, the School has operated a dining room and bakery shop open to the public.

One of the most important specific types of training comes through the field of Distributive Education. This program is well developed as a senior elective in the high schools and also as a part of the Edison Day and Evening Schools. Careful training is given prior to placing workers in the store and a close relationship is observed between the school and the departments where workers are placed. Although this program was well established before the war, its value was thoroughly realized during the emergency period.

In the *Saturday Review of Literature* of November 10, 1945, Foster Kennedy discusses "Compulsory Education—6 to 60."

"The heart of my idea is to beg you to consider the necessity of compulsory education of all, up to say, sixty years of age. This could never be continuous; it would be part-time and occasional; perhaps each man and woman every five years would be compelled to learning for a six months' period, three or four hours a day. This is a lot easier than military service and much better for both the world and the people in it."

The idea that Mr. Kennedy is begging us to consider already has practical application here in Seattle. Facilities, both personal and physical, are at present strained to the utmost to accommodate the increasing number of adults desiring either part-time or full educational advantages. An important factor of this work at this time, is the Veteran's Program, centered at Broadway High School.

Returning servicemen are admitted every two weeks and are offered classes in English, sciences, mathematics, social studies, and foreign languages—all the required subjects of high school. The Veteran's Program was begun in the fall of 1944 and up to the present time has enrolled almost 600 veterans. Every effort is made to adapt this program to the individual needs of the men and to operate with sufficient understanding and elasticity to care for both academic and personal variation.

The establishment of the Veteran's Program in Seattle was not a difficult attainment because the Curriculum Council has developed a philosophy and procedure of education which is both flexible and inflexible. The Curriculum Council operates under an assistant superintendent, in coordination with directors of subject matter and special activity areas. All programs are planned from kindergarten through grade twelve. Each area develops its own core material in integration with all related fields. Young people are given definite instructions and training in developmental programs which are integrated with outside living experiences and with all other school experiences, for instance, the English and social studies classes work in close correlation not only in the building of abilities, but in the establishment of attitudes and competences both for the individual and the group.

Seattle schools are no longer committed to a definite program of ability grouping. For ten or fifteen years, however, some high schools have offered courses planned explicitly for college and for non-college preparation. Students elect to enter either course according to their future plans. The materials and interests in the classes differ but the training for individual, social, and civic development are the same.

The courses of study in the Language Arts and in Social Studies, definitely plan for

accurate observing, collecting of facts, establishing of authority for all data used, considering source of information, analyzing propaganda for weighting and slanting, understanding of vocabulary implications, and evaluating two sides of a question before drawing a conclusion. When it is possible, a solution to the problem is suggested. A discussion of the value of minority groups becomes real when the participants are a Negro, a Japanese, a Chinese, and a Jew. This type of training gives young people experience in the true democratic procedure which is essential to the maintenance of a free world for a free people.

Another aspect of democratic procedure well established in the Seattle classroom is the practice of student organization and control. Student chairmen are used frequently in both the elementary grades and in the high schools. Very often a class operates in small groups of five or six students, with a chairman in charge of each group. These small groups then discuss and report to the entire class so that there is thorough practice in discussion, reporting, and consideration of varying points of view. One of the chief values of work of this type in the classroom is that students are not only given training in thinking and analyzing their problems, but many students

each day have opportunities for leadership. The theory is that every individual should learn to be an effective leader and a cooperative follower.

During the past five years, Seattle, like all cities in the Pacific Northwest, has experienced a rapid growth. The absorption of such great numbers and varieties of people has been both complicating and challenging. Seattle has attempted to take the complication as a part of the war effort. She has accepted the challenge as an incentive for a more adaptable type of education, suited to needs of every individual and productive for the advantage of all groups of the population.

Democracy is not learned by rule or theory. If the principles for which we have sacrificed so much are to be more than "words, words, words," they must be woven into the very fabric of our living, warp and woof. Tolerance must mean understanding and acceptance of classmates and neighbors, government must mean the orderly management of a class, an activity group, or a student body. Thus learning becomes living and living is in terms of the growth of the individual as a citizen who today and tomorrow will be acquiring new power not only for himself but for the group from which he expects and to which he gives the best.

CHICAGO

LESTER J. SCHLOERB

*Director of Occupational Research
Board of Education, Chicago, Ill.*

MOST communities and school systems are making every effort to do something about the returning veterans and displaced war workers. There have been many varying answers. In meeting these issues in Chicago, the school system has gone on the basis that the key word which indicates the policy to be adopted is *adaptability*. Some may call it

flexibility. This means that a school system should be ready to meet whatever demands may be placed upon it with regard to counseling, training or placement.

In order to discover the place which the Chicago Schools needed to take in meeting the problems, responsibility was centered in the office of an Assistant Superintendent of Schools and a counseling committee, comprised of representatives from all types of Chicago schools. Veterans were interviewed and close co-operation was maintained with

the Veterans Administration and veterans referral agencies so that, when judgments were combined, the school system would know what direction to take. It was felt that this method would keep the program more up to date and capable of changing when necessary than would a program built upon the results of one survey. As a result of this type of approach, the Chicago Schools have built what they consider an adaptable program involving five points.

1. Offering the enthusiastic veteran who wants to *complete his high school education*, a variety of ways in which to accomplish it. In this connection, the Chicago Schools are taking the stand that a veteran may enter his former high school if he so desires. He is, however, urged to consider the accelerated program offered in three special veteran centers in which individual treatment and fully accredited accelerated teaching is provided. Or, he may want to take the General Educational Development tests through the special facilities provided by the Chicago Public Schools and recognized by accrediting agencies as a means of giving evidence that a veteran has completed the equivalent of high school work. As a result of this adaptable program, veterans are distributing themselves in each of these three categories with comparatively few accepting the first.

2. *A comprehensive vocational training program* in line with the needs of the veterans and the war workers who are adjusting to new demands. In this connection, the trade schools and the evening schools have set up a wide variety of special courses which have thorough or refresher training in mind. The key word again at this point, is *adaptability* since the schools set aside for this type of training have accepted the responsibility of adapting their programs to the employment and community needs together with the individual interests of the veterans and war work-

ers. This means that new courses will be introduced as demands become apparent.

3. *Close cooperation with industry* in helping to set up in-plant training programs for the veteran or war worker. In Chicago there is close cooperation with all industries in making the training facilities of the schools available to them through the use of school buildings or in direct in-plant training.

4. *A comprehensive counseling program* which aims to try to answer the kinds of questions raised by the veteran. When such questions involve school policy or programs, every effort is made to give terminal service in this connection and no "run around." In those cases where school policy is not concerned, every effort is made to provide intelligent referral to the person or organization that can give the answer desired. In order to carry on responsibilities in this connection, a counseling committee is used which has been very effective in bringing about rapid change of policy when this was deemed necessary. A counseling manual is used which is so constructed that it can be changed and become effective almost overnight and thus carry out the program of adaptability to which the Chicago Schools are committed.

5. *A program of placement* which will conform to the community pattern in meeting placement needs. In Chicago, this involves close cooperation with the placement counselor in each of the high schools and with similarly assigned people in each of the Junior College branches. The work of these people is closely related to cooperative relationships with the Industrial Relations Association, the Association of Commerce, and the public employment services. Here again the program of adaptability is in operation and there is every evidence that cooperative relationships existing between these organizations will result in maximum service to the vet-

eran or to anyone concerned with training provided in the Chicago Schools.

The *ability and willingness* of a community to be adaptable in meeting the new and often strange demands of the veteran and the

war worker, coupled with the *means of discovering* these demands, constitutes Chicago's answer to the way she is meeting and intends to meet her future responsibilities to the veterans and displaced war workers.

PROVIDENCE

ELMER R. SMITH

Supervisor of Curriculum Research, Providence Public Schools, Providence, R. I.

THE Providence School Department has always had a well-organized guidance service in its secondary schools. The heart of the guidance program is a specially selected and trained counselor who carries on a continuous study of individual differences of a class of pupils for their entire three years of school, first at the junior high school level and then at the senior high school level. This counselor has an individual interview at least once each term with every pupil, and teaches the entire class in group guidance for two periods a week for the three years of the junior high school, and then another counselor takes over for the three years of senior high school.

The counselor has the assistance of such supplementary guidance devices in the central office as visiting teachers, central records office, psychiatric clinic, psychological and edu-

cational testing service, hard-of-hearing clinic and placement office.

In addition to the counselor provided for students taking a straight high school course, there is an adult counseling service, where an experienced adult counselor assists in solving the problems of educational and occupational adjustment experienced by returning servicemen and women, those released from civilian war occupation, and others desiring further education. The adult counselor, in addition to serving as a link between the school department and the various state and federal agencies supervising the training or retraining of adult students, works in close conjunction with the regular counseling services of the public school system.

Among the counseling services offered are:

1. Information concerning educational and occupational opportunities.
2. An inventory and appraisal of educational achievement in all school subjects.
3. An inventory and appraisal of occupational aptitudes, skills, and related achievements.

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**DESIGN — CONSTRUCTION — MANAGEMENT
INVESTIGATIONS AND REPORTS
PUBLIC UTILITIES AND INDUSTRIALS**

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PACKARD BUILDING**

CHICAGO

4. Guidance and adjustment in the selection of school, fields of study and specific courses.

It is the task of the adult counseling staff to see that the occupational training provided in the schools for the returned war veteran and unemployed war workers is geared to real jobs and that it results in definite occupational skills.

Vocational courses of a trade or trade-extension nature, including short-unit courses, are offered in the Providence Trade School in the Central High School in both day and evening classes. Commercial courses, general education courses and those in arts and crafts at the Central Evening High School and by day at this high school and two others. College preparatory courses are offered at each of the high schools and at Classical High School which is exclusively college preparatory. Courses in arts and crafts are offered in both the day and evening high schools, while training in defense occupations is provided under the National Defense Training Program in various plants throughout the city. Courses in elementary school subjects are offered to those who have not completed the work of the grades, with provision made for instruction during the day or evening to suit the convenience of adult students.

Since the number that can be admitted to trade classes is limited, applicants are tested for ability and aptitude. A guidance interview also considers the previous school record of the applicant, after which a selection is made for admission of those applicants who are most likely to succeed in each course.

The school board tries to meet, as far as possible, the individual educational needs of all veterans with the exception of those who desire training at the collegiate level. Instruction does not have to be taken necessarily in organized courses. Special provision is made

for those who wish to study individually or in small groups. Therefore, instruction can be scheduled in the late afternoon, on Saturdays, or at times most convenient for veterans who may be employed but desire to continue their education.

In the vocational courses, the teachers have had years of experience in both industry and education, and therefore bring into the school shops the most modern practices. All vocational and commercial classes are equipped with modern tools and machines. Trade advisory committees, composed of representatives of labor and industry, exist in each of the vocational fields. These committees aid in organizing training programs for various vocations and in keeping these programs in harmony with changing industrial demands and practices.

In addition to the regular vocational courses for employment in some skilled trade or occupation, which take two or more years to complete, numerous short courses of from three weeks to six months are offered. These courses offer an opportunity for part-time cooperative programs which permit learners to spend part of the training time in the school shop and part in private industry on the job. In addition, the public schools offer programs in cooperation with industries which are conducting apprentice training.

In connection with receiving a diploma, credit is given to returned servicemen and women for their training, education, and experience in the armed services. Evaluation of training, education and experience is in accord with a plan approved by the State Department of Education. Under this plan credit is given for the following:

1. Participation in the off-duty program of educational activities in the various armed services, especially those involving organized instruction.

2. Informal or general educational experi-

ence gained through travel, observation, and personal study of different countries and people.

3. Participation in the military training programs, including basic or recruit training, specialist or technical training, and work experience.

The adult counseling service works in close cooperation with the Veterans Administration, the Veterans Guidance Center, and other agencies in seeing that the returned veteran receives the fullest possible credit for military training, education, and experience. In addition, every effort is made, once military experience has been evaluated and credited, to see that the veteran has an opportunity to select and make progress in courses which are in accord with his needs and his desires.

In addition to courses of various types at the high school level, veterans also may attend the Technical Institute. The Technical Institute has been established for the purpose of furnishing advanced technical training to qualified high school graduates. Providence and its environs represent a highly concentrated industrial area which steadily demands

workers who can qualify as foremen, supervisors, superintendents, master-mechanics, toolmakers, inspectors, salesmen, draftsmen and designers. The instruction offered in the two-year courses of the Technical Institute gives a preparation which leads to these important positions.

The aim of the Technical Institute is to give students with a high school education intensive training to enable them to earn a livelihood in advance positions, and to furnish industry with a supply of able and competent workers. It serves especially those students who aspire to be technicians, rather than full-fledged engineers, or who want advanced technical education, but, like many of the veterans, who have family responsibilities, do not have time for a full college course. Its courses are shorter than collegiate courses, and more directly practical, yet they include a substantial treatment of the underlying and related sciences and some work in English and industrial organization. Courses in the Institute are offered and diplomas granted in Architectural Construction, Industrial Electricity, Mechanical Drafting, Printing and Toolmaking.

DENVER

JAMES A. HALL and PRUDENCE BOSTWICK
Supervising Teachers, Department of Instruction, Denver Public Schools, Denver, Colo.

THE findings of a survey of the educational needs and interests of veterans in the Denver area have given the Denver Public Schools a basis for planning a program for the education and training of veterans. During the time the program is in force, the schools expect to work with approximately 2,000 veterans who desire to complete a high school education and with approximately 10,000 others who desire training in trades and industry or business education. The program is

centered in the Emily Griffith Opportunity School which has been providing pre-college educational experiences for adults in Denver for almost thirty years. Begun in 1916 as an experiment in public adult education with a teaching staff of 45 and a student body of 2,398, the school expanded its program until, in 1943, at the peak of war-production training, it had a teaching staff of nearly 400 and a student body of 39,512.

The educational program for veterans in the Denver Public Schools has three chief emphases: counseling, training, and placement. A veteran may avail himself of any or all of these services. Ready to help him is a staff

of counselors and teachers who are especially skilled in adult education. Chief contact man for all veterans who are seeking additional education and training in the Denver Public Schools is a newly appointed adult counselor. As the adult counselor talks with the veteran who has come to him for help, he has two dominant concerns; one, to find out as accurately as possible the interests, needs, and abilities of his counselee, and the other, to discover with the counselee the best educational program for him to follow. If the veteran has already made up his mind what he wants, the counselor sets up a program which the veteran may follow for a trial period to discover for himself how well his wants are being met. If, on the other hand, the veteran is uncertain and looking for help in making up his mind what is best to do, the counselor arranges with the Occupational Adjustment Service for him to take a battery of aptitude and interest tests, the results of which, carefully interpreted through personal interview, may clarify his thinking about himself and his future.

Working closely with the adult counselor in his program planning for veterans are coordinators of the various departments in which veterans may wish to work. These departments include agriculture, apprenticeship, arts and crafts, business education, distributive education, general self-improvement, high school, home-making, and trades and industry. Once a veteran has made up his mind concerning the area in which he wishes to work, the veteran and the adult counselor confer with the coordinator of that area in arranging for specific educational experiences. Once these have been selected, the coordinator takes the veteran to meet the teachers with whom he will work. These are the men and women who have the final responsibility for the education of the veteran—for helping him to gain new understandings and skills or to recapture old skills which have been dulled through disuse. The

teachers of the Opportunity School consider each veteran an individual and, in the best tradition of the school, they work with him in terms of his special abilities and interests. They watch his growth; they advise changes in program when such changes are needed. They help him to find interest in new methods and ideas; they regard him always as one for whom educational experiences must be individually fashioned.

For the majority of veterans coming to the Opportunity School, placement in the right job is of paramount importance, whether it is a part-time job while they are in training or a full-time job when their work is completed. All during training at the school, the interest of each veteran is centered in a specific job or vocational area which he has selected with the help of the adult counselor. This job has been chosen, not only in the light of his abilities and experiences, but also in the light of the demands of the community for his services. As the period of his training comes to an end, the veteran works closely with the adult counselor in finding full-time employment.

The adult counselor, through the work of the Occupational Adjustment Service and the coordinator of the Opportunity School, has at his disposal all available information concerning job and training needs in Denver. It is his responsibility to assist the veterans who are training at the Opportunity School in locating positions which, as far as possible, will give them a chance to become contributing and well-adjusted members of the community.

In the placement of veterans, the adult counselor works closely with the supervisor of the Occupational Adjustment Service and with the Denver office of the United States Employment Service. This cooperative arrangement insures the widest possible employment field for veterans.

Veterans Referred to Opportunity School

In Emily Griffith Opportunity School may be found the newly appointed adult counselor of the school whose special responsibility is that of contact man for all veterans who are seeking additional education and training. Any veteran may come for consultation. No tuition charge for classes is made for veterans who are residents of Denver. There are no academic requirements for entrance. The one condition is that a veteran select those educational experiences which he believes will most nearly meet his needs and most surely move him forward in his plans of adjustment to civilian life.

Men and women come to the adult counselor from centers all over the city: from the separation centers at the surrounding army camps and hospitals, from the Veterans' Administration, from the United States Employment Service, from the American Red Cross, from the colleges and universities of the region, from the Denver Council of Social Agencies, and from employers in the city who advise their new employees to take refresher courses or develop new skills at the Opportunity School. Sometimes the veterans come entirely of their own accord, having heard of the work of the school in building educational programs to fit the requirements of each individual learner.

Courses in the Three R's

The adult counselor talks with each veteran to discover in broad, general terms how the Opportunity School may help him. Among those who come to the counselor are veterans who through their army experiences have first begun to read and write the English language. They realize now the importance of literacy, and they are determined to seize upon this new chance to improve their contact with their fellowmen. The counselor tells them of classes in ungraded academic work for adults now

going forward at the Opportunity School. Here, in company with a few others, veterans can learn the fundamentals of education: reading, writing, spelling, arithmetic, and a simple social science which introduces them to geography, history, and some of the pressing social problems of the day. The level of these classes is about sixth, seventh, and eighth grades. Once a veteran has proved his mastery of these fundamentals, he will receive his eighth-grade certificate and be ready to go on, if he wishes, to work for his high school diploma. If any veteran finds this program to his liking, the counselor takes him to the high school coordinator who enrolls him and introduces him to his class. Here he starts at his own level of attainment, always working as an individual and measuring his growth in terms of his own abilities.

Should the veteran in question have very little or no skill in reading, he is placed in a different class from that described above, where he concentrates upon reading, writing, spelling, and speaking.

Work Leading to a High School Diploma

Veterans may participate in the accelerated high school program, unique to the Opportunity School, in which they may complete the work necessary for a diploma as fast as they are able to earn fifteen units of credit. They have to earn a minimum of three units of credit in this school in order to receive a

Charles S. Leopold
Engineer

213 South Broad Street
Philadelphia

diploma. They may earn these credits by class attendance and by proof of competence through participation and examination in any field, such as English, social studies, science, language, mathematics, industrial arts, fine arts, chemistry, home economics, and the like, in which the Emily Griffith Opportunity School or any Denver high school offers courses. No limit is placed on the number of credits a student may earn during the school year.

Of particular interest to veterans who want high school diplomas is the acceptance of the Opportunity School of special high school credits for military service. Two units of credit may be applied for completion of basic military training; additional units of credit may be granted for specialized training while in service. Upon certification, formal high school subjects taken through the Army Institute or other recognized schools will be evaluated by the Occupational Adjustment Service of the Opportunity School toward high school graduation.

Veterans who are matured far beyond adolescent boys and girls do not care to return to a regular high school. Instead, it is desirable from the standpoint both of the schools and of the veterans, that they work with students of a similar background of experience. Accordingly, veterans are counseled to enroll in the high school classes of the Opportunity School where they can associate with men and women of their own general maturity.

Closely related to work toward a high school diploma is the work of other veterans in individual high school subjects, such as physics or mathematics, which they must have to meet the entrance requirements of technical schools or colleges. All of these veterans have probably already completed their high school course before the war, but they did not take at that time enough special courses for their present needs.

Classes Giving Specialized Vocational Training

The majority of the veterans coming to the adult counselor at the Opportunity School are seeking specialized training for jobs. Some are entering refresher courses so that they may be better able to use old skills as they return to jobs held before the war; others are taking advantage of the year of training guaranteed by the G. I. Bill of Rights to learn a new trade.

The Opportunity School is greatly expanding its vocational program to care for approximately 10,000 veterans. Of these, 7,632 will probably be in trade and industrial education and 3,360, in business education.

In carrying on this program, the school has the help of advisory committees made up of representatives from management and labor in equal number. These committees, one in each area in business, trades, and industry, meet with school personnel to assist in the planning and evaluation of training programs. The purpose of advisory committees is to keep the curriculum of the school geared to the needs of industry; to insure that the number of people trained is related to the demand; and to enable trainees to make continuing progress on the job. This year sixty-three such advisory committees are at work.

The development of refresher courses for about 40 percent of the veterans seeking training is not a new experience for the Opportunity School. Ways for setting up such courses have been perfected through the participation of the school in the war-production-training program. From the beginning of the program in June, 1940, to May 1, 1945, 18,416 people through such courses sharpened skills they had previously had and made those skills contribute to the war effort.

In planning for the vocational education of veterans in the many and various occupations

of their choice, the Opportunity School faces the problem of providing almost four-fifths of the classes on a part-time basis. Again this is not a new situation to the faculty, who are accustomed to working with many individuals who attend school part time while they are employed. Nor is the preparation of an educational program on a part-time basis the Opportunity School's only concern with this problem. It is vital that a veteran who wants employment part time should have the chance to get it. Therefore, the adult counselor at the Opportunity School and the supervisor of the Occupational Adjustment Service are making every effort to help those veterans who want part-time jobs to find them.

Training in Trades and Industry

Many of the veterans who come to the adult counselor for guidance want training in trades and industry. As has been shown above, approximately half of these need refresher training for jobs in which they have already had experience. Some veterans ask for help in the manipulating of machines new to them which were introduced into industry during the war; others need additional information concerning materials and processes of production. Frequently these courses are provided in the evenings, or veterans may come for a week or two of full day-time instruction prior to their employment.

Other veterans are interested in fitting themselves for new jobs. One veteran, for instance, through his work in the Army, has become interested in refrigeration. He is now at school devoting full time to mastering the skills and understandings necessary for holding a job in this field.

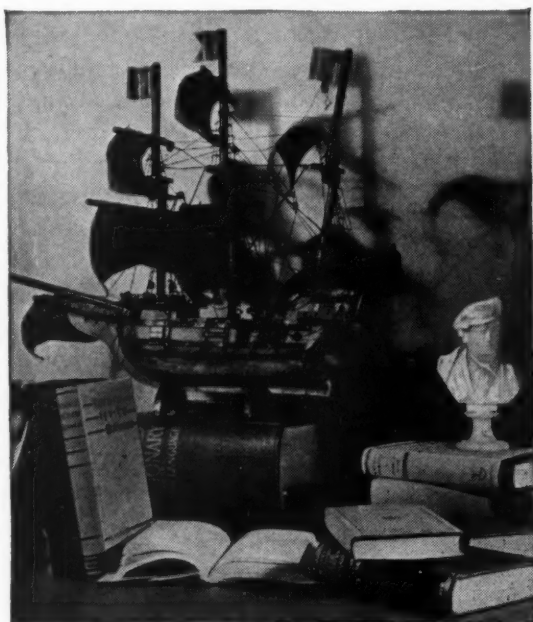
Still other veterans are working in the apprentice program developed jointly by the Veterans' Administration, the United States Apprentice Training Service, the Colorado State Department of Vocational Education, and the Denver Public Schools. This plan involves a contract between the employer and the apprentice in which agreement is reached upon a schedule of wages to be paid to the apprentice, upon hours of work, and upon a schedule of work experiences for the apprentice on the job. A minimum of 144 hours a year of related training is also required in standard apprenticeship agreement. This training is available at the Emily Griffith Opportunity School.

Business Education

In business, as well as in the field of trades and industry, veterans come to refresh skills already established or to learn new skills and techniques. According to the survey of Denver veterans, 88 per cent of the veterans wishing business education are apt to ask for salesmanship, typing, bookkeeping, shorthand, or accounting. However, the adult counselor will have little difficulty in finding educational opportunities for veterans who come to him seeking training in almost any kind of business, for as many as fifty different classes in business education are available and additional classes may be set up as needed.

In the years that the Emily Griffith Opportunity School has been serving the people of Denver, an extensive educational program has been built up. Current offerings include approximately 150 courses. New courses not now in the program may be developed at the request of students.





*"We must know what the world needs first, then invest ourselves
to supply that demand + and success is almost certain!"*

DR. RUSSELL H. CONWELL

*T*hese words of Temple University's Founder answer fully today's most urgent personal question, "What shall I do with my life?" They crystallize, also, the constant aim of the University itself—to supply the education that is most needed—to those who need it most!

TEMPLE UNIVERSITY

PHILADELPHIA

CAREERS IN BUSINESS



HARRY E. STONE, *Secretary, Loans and Placement,*
West Virginia University

According to many surveys, one of the greatest fields of opportunity in the coming years will be in the service positions, such as selling, advertising, traffic management, and similar positions. Mr. Stone here summarizes the various fields open in business, and the requirements and training needed to enter these fields.

REAL estate, marketing, sales, advertising, finance, traffic management, transportation, factory management, insurance, personnel management, accounting, etc.

1. Building management, real estate brokerage, the management of the properties of corporations, acting as adviser to the real estate department of a chain store organization—these and other careers are open to men and women trained in meeting and solving real estate problems. A vast army of men are employed in buying, leasing, selling, maintaining, managing and operating real estate.

2. Opportunities in marketing are broad and varied; comprising careers in selling, advertising, market research, efficiency and cost investigations, marketing campaigns, forecasting, price policies, etc. It includes wholesaler, jobber and retailer. Ideas, services and commodities are marketed. Everything from drugs to diamonds, from gravel to groceries and from waste baskets to watches must be marketed. The choice of a career in this field is not easy even after one has made a comprehensive study of marketing.

3. The psychology of salesmanship is a branch of psychology of great importance to all who enter upon business careers. The hiring, training and management of salesmen, the allocation of sales territory, the conduct of sales conventions and sales contests, the establishment of sales quotas and the correlation of sales with production, buying and

advertising are functions of the sales manager. The days of the old fashioned drummer are over. The era of the trained salesman is here. Leaders in business predict that the post-war period will provide increased opportunities in the field of selling and sales management.

4. Careers in banks, bond houses, brokerage houses, building and loan associations, Federal Land Banks and other financial institutions are varied. All call for absolute integrity and training. Some demand experience. This is especially true of positions in banks requiring judgment, like the passing on loan applications.

5. Traffic management, transportation and warehousing offer many career opportunities, especially in the expanding field of air transport. Specialists in transportation costs, routes, facilities and services are demanded. Freight rate making, the regulations of the Interstate Commerce Commission, transportation law, air laws, etc., are all involved in many of these occupations.

6. Factory management is the ultimate goal of many University men who enter upon industrial careers. This involves an understanding of factory organization, financial management, accounting, control of production, purchasing, sales and advertising management, plant layout and equipment, job standardization, incentive plans for wage payments, store-room and stock management, industrial rela-

tions and all other functions of a modern industry.

7. Careers in life, accident, health, fire, liability, automobile, marine, credit, burglary, theft and larceny insurance are many. Life insurance is perhaps the broadest field. The fitting of the policy to the needs of the insured and an understanding of term insurance, ordinary life insurance, limited payment insurance, endowment insurance, group insurance, sales methods, etc., are sufficiently difficult to warrant the inclusion of insurance as one of the professions. The certificate of C.I.U., or Certified Life Underwriter is obtained only after much study and successful experience.

8. Of the five M's in business, men, money, materials, machinery and management, the problems relating to men are perhaps most important and most neglected. The personnel department deals primarily with the problems of the worker. These include selection, training, assignment, transfer, promotion and discharge or furloughing of employees. They include also safety, health and recreational programs, wage incentive systems, studies of labor turnovers, efficiency systems, benefits, pensions, employee morale, working conditions, employee representation, the plant magazine, cafeterias, etc. Personnel work in industry offers opportunity for University men and women with a wide variety of interests and training. In large personnel departments, one finds graduates in business administration, physical education, medicine, journalism, home economics, engineering, etc.

9. Works accounting, auditing and public accounting offer varied positions for trained men and women with an aptitude for numbers, an interest in details and an analytical mind. Few people have aptitudes and interests that would make them equally successful in sales work and accounting.

10. With all parts of the world within sixty hours by air of any American city, marketing geography has become vitally important. The

post-war need for geographic knowledge will be great. Trading centers and trading areas for raw materials and manufactured goods must be known. Products must be modified to fit geographic conditions. Sales and banking methods must be adapted to local customs. Geographic and climatic factors determine the tastes, needs and buying habits of people. So also do the dominant industries in various parts of this and other lands.

11. The radio, the airplane, increased newspaper and magazine circulation, and the wider diffusion of education among the masses has widened the range of influence of advertising and increased its importance as a career for University trained men.

12. Selecting advertising media, writing effective copy, buying and selling space, the utilization of art in advertising appeal, the skillful use of the psychology of suggestion, the use of color and motion in getting attention and the building of advertising slogans are all a part of the work of advertising agencies.

13. Graduates in business administration find positions that are attractive in large credit companies. The making of credit investigations is important today. Large companies employ men who find out about the health and habits of those who apply for life, fire, accident and health insurance. Applicants for surety bonds, automobile insurance, credit, etc., are also investigated. This furnishes employment for an army of employees.

"A man politically free is yet a prisoner if he is bounded within the limits of a narrow vocational cave."

DR. QUINCY WRIGHT,
University of Chicago.

"Economics is the science of business. It is the field of thought that embraces all questions which relate to business; it excludes

all others. Accounting is one of the most useful and practical studies in the field of Economics. Like banking and statistics, it is both a study and a vocation. The accountant will profit if he has a foundation in the broad field of Economics, he will be a more intelligent worker."

H. E. STONE

A study of 10,000 men made under the auspices of the Carnegie Foundation showed that technical training accounts for 15 per cent of one's success, and personal qualities are responsible for the remaining 85 per cent. The most important qualities listed by the foundation as essential to success are: a right attitude, initiative, thoroughness, observation, concentration, creative imagination, decision,

adaptability, leadership, organizing ability, expression and knowledge.

The college senior seeking employment will do well to find out the quality and amount of training offered workers after they have been placed in initial jobs. Some corporations have elaborate educational programs for their workers. One large electrical manufacturing company provides both cultural and technical training for its employees. Some banks, department stores, security houses and publishing houses provide in-service training for workers. Since this training prepares workers for promotion, it is worthy of careful study by seniors faced with the problem of deciding which job offer to accept. Working conditions, cost of living, effects of reconversion on new employees and other factors should be studied by seniors.



NEW YORK ADVERTISERS ASSIST VETERANS

A GROUP of 27 organizations in advertising and related fields have organized a plan to find veterans the jobs that they are best suited to fill in these fields. The organization, called *Veterans Guidance in Advertising*, was started last July at the Advertising Club in New York.

The program consists of preliminary interviews and screening, attendance at the weekly evening meeting, where veterans learn the details of the plan, and also receive individual counseling from executives in the many branches of advertising, attendance, if necessary, at a three-week refresher course, and an interview with a staff member at the general office. After taking part in these activities, the veteran is referred to one or more potential employers.

The job-finding techniques are those of the Job-Finding Forum which grew out of the Man Marketing Clinic originated in 1935 by Sidney Edlund. Its features include self-analysis, planning a job-seeking campaign, preparation of a sales instrument, such as a portfolio of work to show prospective employers, and assembling leads and following them up according to a prescribed plan.

The procedure in referring the men to jobs is much like that of a regulation employment bureau, except that no fees are paid. Each job is numbered, and at any time a staff member could tell you what has been done toward filling it. Some of the men are hired before they complete all the steps of the program, by executives who are working in the plan.

Some of the men seeking advice intend to complete studies in the various fields, and want to know about courses and schools. Many of these men, who find that schools are too crowded for them to enroll until next September, are seeking temporary jobs in the field in which they are interested.

Where there is Certainty,
there is OPPORTUNITY.

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upon Certainty, and
therefore Life Insurance
offers OPPORTUNITY
to the young man who
is seeking a career and
who likes people.



**The NATIONAL LIFE AND
ACCIDENT INSURANCE Co.**
of Nashville, Tenn.

UNIFORM PLACEMENT CREDENTIAL FORM FOR COLLEGES

IN the fall of 1939, the chairman of a committee on this subject of the Pennsylvania Institutional Teacher Placement Association collected copies of placement forms from the placement officers of various colleges affiliated with the Association. An analysis was made of the items that appeared on these 38 forms, and they were classified under four general headings. These were, Personal Data, Education and Certification, Student Teaching and In-Service Experience, and Confidential Recommendations. In 1940 a questionnaire based on this study was prepared to determine whether placement offices were admitting in their recommendations of candidates the information desired by employing officials, and was submitted to several hundred of these officials.

During this past year, a follow-up study was made by this committee, during which 36 county superintendents, 79 district superintendents and 92 supervising principals returned a questionnaire with the items suggested for placement forms checked as follows: (1) very valuable information, (2) desirable but not invaluable, (3) negligible or insignificant. The responses to the two studies which were made five years apart correlated very highly.

With this information the chairman of this committee, L. H. Wagenhorst, of Slippery Rock State Teachers College, has prepared a sample set of credential forms to conform with the standard information desired by employing officials. All the items which were rated very desirable are included on these forms. The Association is herewith presenting a copy of this form, with the hope that it will be of aid to other placement offices, who could utilize it with a few additions or changes.

STATE TEACHERS COLLEGE Confidential Credentials

I

CANDIDATE'S NAME	Jane Doe		
COLLEGE ADDRESS			
	(For Seniors Only)		
HOME ADDRESS	134 Madison Ave., Sharon, Pa.	TEL. NO.	1234
DATE OF BIRTH	Nov. 1, 1923	HEIGHT	5'5" WEIGHT 120 lbs.
		(For Seniors Only)	
NATIONAL DESCENT	German-English		
GRADUATED FROM	Sharon (Mercer County)	HIGH SCHOOL	
	(Name H. S. and County)		
H.S. CURRICULUM COMPLETED	Academic	YEAR	1940
RANK IN HIGH SCHOOL CLASS	Highest percentile		
INTELLIGENCE QUOTIENT	111 (Otis)		
COLLEGE HEALTH RECORD: PHYSICAL DEFECTS, IF ANY	No physical defects; general health—good; health habits—satisfactory.		
RATING FOR CONDUCT WITH DEAN OF MEN/WOMEN	Sense of honor—good; attitude toward authority—good; cooperation—very satisfactory; self-control—average; personal appearance—excellent		
MARITAL STATUS: SINGLE	X	: MARRIED	: WIDOWED
	DIVORCED	: SEPARATED	

II

Jane Doe

Certification

Candidate has completed (X): expects to complete () the course checked:

Date of Graduation May 28, 1944

() Degree Course in Elementary Education

(X) Degree Course in Secondary Education (Certificated in fields checked)

() Degree Course in Health and Physical Education (Certificated in fields checked)

Semester Hours	Fields	Scholarship Rating
	Biological Science	
	Chemistry	
37	English in Grades 7-12	A
	French	
21	General Science (Grade 9)	B-
	Geography in Grades 7-12	
	Hygiene, Health and Physical Education in Grades 1-12 (This certification includes supervision of these subjects)	
	Mathematics in Grades 7-12	
	Physical Science in H.S.	
	Science in Grades 7-12 (All)	
	Social Studies in Grades 7-12	
	Speech in Elementary Grades	
29	Speech in Grades 7-12	B
	Spanish	

Additional Preparation: Is enrolled for additional work in the field of speech at the University of Michigan this summer (1944)

Other Institutions Attended: _____

(Applicable to transfer students)

III

Jane Doe

Extra-Curriculum Interests

Candidate has participated in the College activities checked:

<input type="checkbox"/> A Cappella Choir	<input type="checkbox"/> Madrigal Club
<input checked="" type="checkbox"/> Alpha Psi Omega (National Honorary Dramatic Fraternity) <i>President</i>	<input type="checkbox"/> Men's Glee Club
<input type="checkbox"/> American Singers	<input type="checkbox"/> Mu Kappa Gamma (Music Fraternity)
<input type="checkbox"/> Baton Club	<input type="checkbox"/> Nature Guides' Club
<input checked="" type="checkbox"/> College Annual Staff	<input type="checkbox"/> Phi Delta Pi (National Honorary Women's Health Education Fraternity)
<input type="checkbox"/> College Band	<input type="checkbox"/> Pi Gamma Mu (National Honorary Social Science Fraternity)
<input type="checkbox"/> College Orchestra	<input type="checkbox"/> Press Club
<input type="checkbox"/> Commuters' Club	<input checked="" type="checkbox"/> Psychology Club
<input type="checkbox"/> Cooperative Activities Board	<input type="checkbox"/> Rifle Club/Team
<input type="checkbox"/> Current Problems Club	<input checked="" type="checkbox"/> Rocket Masquers
<input checked="" type="checkbox"/> Debate Club/Team	<input checked="" type="checkbox"/> "Rocket" Staff (College Newspaper)
<input checked="" type="checkbox"/> Dramatic Club <i>Secretary</i>	<input checked="" type="checkbox"/> Sigma Tau Delta (National Honorary English Fraternity)
<input type="checkbox"/> Elementary Council (A.C.E.)	<input type="checkbox"/> String Quartet
<input type="checkbox"/> English Singers	<input type="checkbox"/> Student Council
<input checked="" type="checkbox"/> Freshman Open Road Club	<input type="checkbox"/> Senior Open Road Club
<input type="checkbox"/> Gamma Theta Upsilon (National Honorary Geography Fraternity)	<input type="checkbox"/> Trigcalana
<input type="checkbox"/> Geography Club	<input type="checkbox"/> Varsity Club
<input type="checkbox"/> Honorary Science Club	<input type="checkbox"/> Vesper Choir
<input type="checkbox"/> Honor Board	<input type="checkbox"/> Women's Athletic Association
<input type="checkbox"/> International Relations Club	<input type="checkbox"/> Women's Glee Club
<input type="checkbox"/> Inter-Varsity Christian Fellowship	<input type="checkbox"/> Women's Self-Governing Association
<input checked="" type="checkbox"/> Kappa Delta Pi (Honorary Society in Education)	<input type="checkbox"/> Y.W.C.A.
<input type="checkbox"/> Kappa Gamma (National Honorary Speech Fraternity)	<input type="checkbox"/> Y.M.C.A.
<input checked="" type="checkbox"/> Literature Club	
	<u>Plays piano</u>

Athletic Activities

<input type="checkbox"/> Varsity Football	<input type="checkbox"/> Gym Team
<input type="checkbox"/> Class Football	<input type="checkbox"/> Baseball
<input type="checkbox"/> Varsity Basketball	<input type="checkbox"/> Cross Country
<input type="checkbox"/> Class Basketball	<input type="checkbox"/> Varsity Track
<input type="checkbox"/> Swimming Team	<input type="checkbox"/> Class Track
<input checked="" type="checkbox"/> X Swimming Squad	<input type="checkbox"/> Class Volley Ball
<input type="checkbox"/> Varsity Tennis	<input type="checkbox"/> Handball
<input type="checkbox"/> Varsity Soccer	<input type="checkbox"/> Honorary Hockey
<input type="checkbox"/> Class Soccer	<input type="checkbox"/> Class Hockey

Honors or Awards: Red Cross Senior Life Saving Certificate

Miscellaneous Information concerning abilities, achievements, etc.

Miss Doe spent the summer of 1943 as a student at the Pasadena Playhouse, Pasadena, California. During her four years at Slippery Rock she has played the stellar roles in many dramatic productions; her ability in this field is exceptional.

Summary of Student Teaching Ratings

<i>Subject and Grades Taught</i>	<i>Number of Weeks</i>	<i>Ratings</i>
Speech (High School)	18	A—
English (Grade 10)	18	B+
English (Grade 12)	18	B+

(All Miss Doe's student teaching was done in the Campus Laboratory School.)

Comments by Supervisors

Unusually attractive; agreeable, distinct, and flexible voice; energetic; always prompt; well-balanced emotionally; has cultivated tastes; is always courteous and self-controlled; excellent choice of words; shows thorough mastery of subject matter to be taught, has a scholarly background; pupils manifest highly constructive attitude; frequent enrichment of subject matter in her classes.

I think Miss Doe is a particularly fine person. She is an enterprising teacher.

Signed _____

Supervisor of Speech (May, 1944)

Very much at ease in front of a group; flexible voice; full of life; controls the group effectively; prompt, responsible at all times, especially good in homeroom; courteous and cultured; will easily learn self-control as she becomes more mature; good choice of words; excellent background in English; has ability to correlate work well; learned many techniques and tried them out in commendable fashion; interested in literature teaching especially, but recognized grammar and sentence structure handicaps of pupils; made comprehensive lesson plans and carried them out well; makes good objective tests, checks and scales them quite satisfactorily; is original and creative and is able to get the same type of work from the pupils; is capable of becoming a superior teacher in her field.

Signed _____

Supervisor of English 10

Comments by Supervisors (Continued)

Miss Doe has shown excellent qualities of leadership as well as originality and creativeness in her work. Her classroom control should improve when she gets out into the teaching field and proceeds entirely on her own responsibility. She is well grounded in subject matter and is especially good in dramatics. The fields of speech and dramatics are particularly attractive to her.

Signed _____

Supervisor of English 12 (May, 1944)

As a homeroom teacher Miss Doe was most dependable. She was always at school at the time she was expected and ready to accept any appointed tasks. She had her work so prepared that at homeroom periods and before school she was responsible for activities in the hall and room. She learned to discipline in the little groups rather than from the desk; she was careful in checking roll and entries. Miss Doe conducted homeroom periods so that any one could study at all times.

Signed _____

Homeroom Supervisor (Grade 8) (May, 1944)

—Reprinted from Annual Report of The Pennsylvania Institutional Teacher Placement Association.

SHORTENING THE STEP FROM COLLEGE TO JOBS

MARY A. ROUSE

Publicity Director, Marygrove College

A great many employers often complain that, although college graduates have theoretical knowledge of the line in which they wish to work, they have no practical training or knowledge. One answer to this problem is the plan used at Marygrove College, Detroit, where each student prepares for the type of work for which she is best fitted, and obtains work experience in her line during her college career.

Miss Rouse was graduated from the State University of Iowa, where she also received her M.A. degree in Journalism. Prior to her work at Marygrove College, she was a teacher of journalism and English at Fort Madison, Iowa, High School for three years. She is a member of the American College Publicity Association and the Detroit Branch of the American Association of University Women.

ACCUSATIONS are being heard again in some quarters that colleges are remaining aloof from practical problems and situations which their students will meet in positions after graduation. A coordinated program of guidance and experience operating through four years of college is the best answer to such charges.

Each student at Marygrove College, Detroit, Michigan, begins building a "bridge" in her freshman year—a bridge to span the gap between college and a job. During her four years in college she is assisted in this "bridge-building" by her faculty adviser, faculty members who administer occupational interests and personality inventories, the head of her major department, and finally by the placement director of the college.

Marygrove has worked out a detailed and closely coordinated plan to prepare each student for the type of job for which she is by nature best fitted, to arrange for actual experience in such work during summer vacations or a fall or spring semester, to place her in such a position, and then to follow up her achievements, lending a helping hand until she is completely adjusted if necessary.

The first step toward achieving this liaison between college training and work experience comes in Freshman Orientation, a series of lectures and discussions by the president of the college which stimulate the student to take inventory of her own abilities and interests

with a view to developing character and personality.

The next step is an opportunity to participate in a program of volunteer service to various community agencies, including city hospitals, community centers, libraries, orphanages, the Detroit Girl Scouts, and the American Red Cross. Open to all students, from their freshman year on, this program gives the girl a chance to "try herself out" in activities such as recreation leadership, dramatics, secretarial work, various phases of social service, music, laboratory work and other fields.

The program, incidentally, is a considerable source of aid to community agencies served, as the numbers of girls involved in work with each organization will indicate. For example, 114 girls spent from two to three hours a week during a recent semester working in children's wards, receiving rooms, clinics, and laboratories of Detroit hospitals. Thirty-five averaged two hours a week directing all types of recreation in orphanages, and twenty-four did the same type of work in community centers, while twenty-seven were Girl Scout troop leaders or assistants. In addition to providing a job laboratory for the individual and channeling available energies into needed community service, this volunteer program instills in the student the ideal of service, necessary for real success in any job.

After the student has had a chance to

analyze her own inclinations and try out volunteer activities, she works out standard occupational interests and personality inventories, either at the end of the freshman year or during the sophomore year. Sometimes the results coincide completely with the student's personal inclinations, but often an analysis of these inventories suggests new job possibilities. Group conferences led by department heads bring more sharply into focus for the student specific jobs in the field under consideration. Students may attend conferences in as many departments as they choose.

Finally, before deciding on her major, each student confers with her faculty adviser, who aids in analyzing inventory findings and ad-

vising the girl concerning her personal inclinations. The chances are small, therefore, that a student will start her junior year majoring in a field for which she is not naturally suited.

At the end of the junior year a program of work experience begins. Students planning to teach are required to do a semester of directed teaching in their field. Each student teacher spends two hours a day during one semester of her senior year teaching under supervision in Detroit grade or high schools. Music majors teach two hours a day during their entire senior year. Students preparing for recreation leadership are required to direct recreation in city centers one day a week for a semester. An annual conference at the col-



TWO STUDENTS ANALYZING FOR UNITS OF VITAMIN A BY USE OF THE SPECTROPHOTOMETER. MINOR RESEARCH PROBLEMS ARE ASSIGNED TO UNDERGRADUATES, TO PERFECT THEIR SKILL IN LABORATORY TECHNIQUES



MISS MARY LOUISE GITRE, RIGHT, PLACEMENT DIRECTOR AT MARYGROVE, DISCUSSES JOB POSSIBILITIES WITH A STUDENT. SENIORS ARRANGE FOR INTERVIEWS WITH PROSPECTIVE EMPLOYERS THROUGH THE PLACEMENT OFFICE

lege for beginning teachers each October makes further adjustments possible. Graduates who are teaching within traveling distance of Detroit return for these conferences at least three years after graduation.

Field work, *i.e.*, holding an actual job in their major field, is required in many departments and recommended by all. Six weeks of full-time employment is the minimum required, but most girls work longer. Journalism majors must work on the staff of a newspaper or advertising agency, sociology majors must do actual case work for a social agency, and majors in merchandising or retailing must work in a store.

Field work is strongly recommended now in

chemistry, biology, art, mathematics, speech, English, home economics, and languages. As it becomes possible for undergraduates in these departments to find jobs easily in their major fields, the college plans to increase field work requirements. Chemistry majors have worked before graduation as X-ray technicians and clinical laboratory assistants in Detroit hospitals, done analytical chemistry for industrial chemists, and worked in laboratories of drug manufacturers. Not only in these jobs but also in chemistry courses the student becomes familiar with modern equipment and methods used in commercial, clinical, and research laboratories. Chemistry majors also are doing actual research, not

with the expectation that undergraduates will uncover findings of world-shaking importance, but with the intention of learning and practicing techniques which they will use as chemists.

Biology majors have directed nature study at summer camps, worked as assistant technicians in hospital laboratories during the summer, and supervised public school gardens. Majors in commercial art have served as apprentices in Detroit studios, with several accepting permanent positions with the same employers later. Majors in interior decoration have arranged displays, advised customers, and sold merchandise in home furnishing departments of Detroit stores, and probably now in the postwar period can find work in interior decoration studios. Prospective instructors of art teach crafts and art skills in Girl Scout camps and community centers.

Checking production figures to keep within contract quotas in a war plant kept one math major busy during a war summer. Auditing and contract bookkeeping are other summer jobs held by mathematics specialists. Speech majors have directed summer camp dramatics and given private lessons in speech. Majors in English have written and directed songs and skits as camp counselors and community recreation directors.

Home economics positions have varied widely, in keeping with the wide range of jobs in this field. Clothing majors have worked in merchandising control rooms, checking amounts sold and noting returns on advertising. Both foods and clothing majors have written articles for women's pages of newspapers. Student dietitians have helped with meal planning in hospitals, summer camps, and factory cafeterias.

It is more difficult for language majors than for students in other fields to find jobs on which they can use knowledge in their major field full time. Some who have minored in

economics have worked in export offices, where they have used French and Spanish in translating. Many have found jobs indirectly related to their field which have led to full-time use of language training later, however. Several planning to work eventually for Pan American Airlines worked last summer for airlines in the United States, where they learned much of the routine of their future jobs, even though there was little use for a foreign language.

In addition to being required to do a certain amount of field work, students are encouraged to hold jobs every summer. After their freshman and sophomore years they are urged to try out fields which they are considering. During the summer of 1943, 78.2 per cent of the student body worked from two to three and one-half months. In 1944 the percentage was even higher—81 per cent. In 1945, more students attended summer school than in the two preceding summers, but approximately 80 per cent of those not in classes held jobs. The college placement director finds summer jobs for undergraduates as well as permanent positions for seniors. Summer positions for underclassmen have varied widely in type, including such work as welding in a Detroit factory by a girl planning to specialize eventually in writing about labor problems, selling in a college shop by a student interested in retail buying, and assisting in preparing menus and food in a Girl Scout camp by a prospective dietitian.

Another step taken to close the gap between the college classroom and the office or laboratory is a program of "community induction" which requires all upperclassmen to make contacts with adults in their major fields. For example, the college has arranged for sociology majors to attend staff meetings of several social agencies and a psychological clinic and meetings of the city housing commission. History majors have assisted in arranging displays in the Detroit Historical Museum and

are interviewing pastors and long-time parishioners in Detroit Catholic churches to secure historical data for the museum. Chemistry majors have attended meetings of chemical societies. Home economics majors have made field trips to large Detroit restaurants, hotels, industrial cafeterias, city markets, and clubs, and dietary departments of Detroit hospitals.

Speech majors have observed radio broadcast rehearsals, and economics majors have attended meetings of labor organizations. Students cannot, of course, work actively in most of these groups, but they do watch the wheels actually go around instead of getting

second-hand accounts. Also they leave college environment behind and step into the atmosphere of the business or professional world, acquiring the "feel" of their jobs before they leave college.

Finally the college placement office continually surveys the needs of employers in fields and localities where Marygrove graduates want jobs, and uses its findings not only in channeling students into suitable work, but also in reports to the college administrative staff, facilitating additions and changes in the Marygrove curriculum to meet growing needs of business and the professions.



JOBS FOR GI's

AS a large segment of the American labor force is leaving the employ of Uncle Sam and joining the ranks of private industry, the question arises: What kind of jobs are GI's looking for? Army surveys show that five out of six soldiers have pretty definite ideas about their postwar jobs. Nearly two-thirds of them plan to work for someone else, and most of those will return to their former occupations. But only about a third will work for the same employers.

Businesses of their own beckon nearly 10 percent of all Army men, according to the surveys, and a similar number want to buy farms. Nearly all, however, lack sufficient capital, and they universally underestimate the investment needed to start a business or buy a farm.

If veterans' job hopes are fulfilled, there will be a big-scale migration in the first few postwar years. Negroes intend to shift from the South to the Northeast in large numbers. Many white enlisted men hope to move to the Far West.

—The Wall Street Journal, 9/10/45.

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NEW YORK PHILADELPHIA CHICAGO

ON CHOOSING THE ELECTRIC INDUSTRY FOR A CAREER

A letter from a prominent executive of the industry to a professor in the school of business of one of the foremost universities in the country.

DEAR PROFESSOR . . .

Your letter . . . asking advice on the question of the opportunities for a career with electric light and power companies presents very interesting questions, especially the one you raise as to the outlook for men rising to executive positions upon proved ability.

Such questions have often been put to me not only with respect to the electric utility business but with regard to other lines of industrial activity. My experience in business, which runs back over 42 years, has indicated to me that it is rather the exception than the rule when a man who attains an executive position has deliberately started out after that particular job when he graduated from college. The result seems to come rather from the cumulative effect of the combined characteristics of mind, character and personality which each individual possesses and gradually impresses upon his associates in the concern with which he is connected. For example, in our business some executives have worked up through the accounting and financial end of it, others started out as lawyers, others as engineers and others as commercial men interested primarily in the development of sales. Whatever the point of origin, however, the successful man in our business, from its very nature, must have those broad, human sympathies which will make him successful in both public relations and in the inspiration and organization of the operating forces.

Naturally, of course, a man has to start doing some specific thing. Day to day operation of the electric utility business involves three main functions. The generation, transmission and distribution of our sole product, electric energy, is, of course, an engineering problem and anyone starting in the operating department should, therefore, have engineer-

ing training along the appropriate lines. A second main division of the business is accounting which includes not only the financing and bookkeeping, but also the collection of earnings. A third main division is its commercial aspect involving the sale of the product which is essential not only for the financial success of the undertaking, but for adequate service and the lowest feasible rates to customers. All three of these, as above suggested, are infused with the problems of public relations which, if not satisfactory, can render all the other work much less effective.

No doubt these general considerations apply to many other lines of business and I have felt, in advising young men as to where to start out in business, that one of the most important considerations is the breadth and stability of the business itself, since I can think of nothing so disheartening as for a man to spend the best years of his life in a business that is either so circumscribed in its activities or ephemeral in its nature that after all the years of hard work he finds he has arrived nowhere. In this respect I consider the electric utility business ideal as its interests are as broad as the whole life of the people. For this very reason I know of no business less affected by variations in the business cycle and I know of no business where a man can feel his efforts are doing more to conserve the general welfare. Furthermore, the breadth of these interests give a well-nigh unlimited field for thought and imagination and for the exercise of those talents in human relationships which are so endless in their ramifications and opportunities.

In my experience the most difficult thing for a young man starting out in business life to learn is patience. An ambitious young man

just starting out sees all the important jobs ahead of him apparently firmly anchored down by people in apparently excellent health so that opportunities for him may seem very slight. He should reflect that all of the men ahead of him in executive positions have gone through the same trying beginning that he finds himself in and that the thing for him to do is to learn the details and principles of his business and prepare himself for promotion when the time comes. I realize that this requires patience, but patience as a rule, is

the last thing a vigorous and ambitious young man thinks of or wishes to exercise.

As you probably gather, my experience has indicated that you cannot keep a good man down and that probably the most important decision a young man has to make in starting out his business career is to get into a line of business in which he can feel an interest and in which the field is broad enough not to circumscribe real ability. In my own opinion, the electric light and power business meets both of these tests.

Reprinted from Edison Electric Institute Bulletin, 1/46.



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in the

Association of School and College Placement

The representatives to receive subscriptions to the journal will be:

EDUCATION FOR AMERICAN CITIZENSHIP

A Presentation by the National Foundation for Education in
American Citizenship

Edited by FRANKLIN L. BURDETTE

IN school systems dependent upon small budgets, and even in many systems better financed, there is an unsolved problem of getting up-to-date information about rapidly changing political, social, and economic issues into the hands of teachers and students. Inexpensive educational material, available for wide distribution, is one of the great needs of American schools. Important steps have been taken to meet that need, but the field of opportunity is still essentially untouched.

Textbooks, published by processes which usually require months for completion, inevitably fall far behind the swift development of events. Periodicals, too little used despite seemingly large circulation figures, have often emphasized reporting of current facts without presentation of background information. Pamphlet publication has been limited by the fact that, by and large, it has been commercially unprofitable. The prices which will attract large numbers of pamphlet buyers is necessarily so low that the usual retailers' mark-up, when deducted from the selling price, leaves the publisher too little margin to cover overhead. Pamphlet publication is therefore often subsidized.

Publication of educational pamphlets is a

major field of opportunity for organizations and agencies willing to make a contribution to the postwar American mind. But the service will be more significant if plans are made for extensive distribution at a nominal price. Complimentary distribution is effective when samples are sent to teachers with an offer for quantity gifts for classroom use. Organizations unable to undertake publication will render a great educational service by underwriting distribution of existing pamphlet literature.

The National Foundation for Education in American Citizenship has published and distributed pamphlets on the Constitution, the Bill of Rights, Constitutional freedoms, political parties, American foreign policy, and fundamental American principles. The Foundation is now cooperating with Human Events, Inc., Washington and Chicago, in distributing a new series of pamphlets to be issued monthly and intended to analyze great current problems. The December issue, *The Atomic Bomb versus Civilization*, is written by by Chancellor Robert M. Hutchins of the University of Chicago. The January issue is *Germany Is Our Problem* by Karl Brandt and the February issue, the *Charter of the United Nations: An Analysis* by Felix Morley.

EDITORIAL COMMENT

One of the most pressing problems facing school administration at the present time is the growing shortage of teachers. In the last four years there has been a decline of 60% in the enrollment in teacher's colleges. In addition to the fact that the enrollment itself is decreasing so rapidly, the quality of the personnel is also falling. Therefore, the problem is not only how to secure an adequate supply of teachers, but also, how to ensure the fact that these teachers will be well trained, and capable of directing and inspiring the minds of the students who will be the leaders of tomorrow.

Even in the field of higher education, there is a shortage of the type of teacher that is needed. The foundation of any school whether it is of secondary or college level, is an excellent faculty. However, the graduate schools, from which come most of the college teachers, are not primarily organized to produce good teachers. The emphasis for the most part is on training research workers and scholars in a relatively narrow field. These institutions should dedicate part of the time spent in graduate work for the training of men to be teachers.

Two things which are essential to attract talented young men and women to the teaching field are the respect due to a learned profession, and the chance to continue to study. However, by far the most important reason for the lack of well-trained teachers is the low salaries teachers receive. Half of the country's teachers are paid \$1,800 or less, and as a result thousands of teachers left their teaching for other, better-paid jobs.

Many of the ex-teachers who worked in factories or other war organizations during the past four years will not return to teaching if there is any other position available, simply because they have had a higher standard of living, and do not want to return to salaries that are so much lower. In many regions, women represent a disproportionately high percentage of unemployment rolls because they won't take less than their war jobs paid.

It is useless to hope that intelligent, well-trained teachers will work for very long at salaries that are so much lower than they could obtain in business and industry. The training of our children should not be in the hands of incompetent and uninterested teachers who teach only because it is the line of least resistance. In spite of the fact that there are many competent and interested teachers in our public schools, the number is diminishing, and will continue to do so, unless some action is taken.

In connection with this problem, we present in this issue an article on an experiment in recruiting teachers which was carried on in a high school in Pennsylvania. This is one step toward the solution of the problem, but unless it is accompanied by economic security, it is by no means the complete answer.

OCCUPATIONAL BRIEFS TO AID SERVICEMEN

THE War Department has published a series of 110 occupational briefs to furnish servicemen with accurate, up-to-date educational and vocational information to help them make adequate occupational readjustments to civilian life after the war. Undertaken as a service for all branches of the armed forces, the briefs are equally applicable to the personnel of the Army, Navy, Marines, and Coast Guard.

Each brief is written in simple language and contains such information as is indicated by the following section headings from the brief on civil engineering:

What Do Civil Engineers Do?

How Do You Qualify as a Civil Engineer?

Who Should or Should Not Take Up Civil Engineering?

Where Do Civil Engineers Work, What Do They Earn, and What is the Outlook?

How Can You Prepare for Civil Engineering and What Subjects Do You Take?

How Can USAFI Help to Prepare a Serviceman as a Civil Engineer?

How Can You Apply for Academic Credit for Military Experience?

Where Can You Find Out More About Civil Engineering and Related Education?

What Jobs Are Related to Civil Engineering?

The writing of these briefs was done in accordance with the War Department's specifications by the staffs of various Federal agencies who were specialists in preparing occupational information. The drafts of the briefs were submitted to an Armed Forces Committee for literary and technical review, and to appropriate authorities such as professional societies, leading universities, management groups and labor unions for factual verification.

The National Roster of Scientific and Specialized Personnel, War Manpower Commission prepared manuscripts on professions ranging from accountant to zoologist. The Bureau of Agricultural Economics, Department of Agriculture, covered the major types of farming; and the Bureau of Labor Statistics, Department of Labor, produced descriptions of ten skilled trades; while the Division of Occupational Analysis, War Manpower Commission turned out manuscripts on the skilled, clerical, and sales occupations.

The need for this type of information was shown by a survey conducted by the Information and Education Division on the attitudes of troops toward post-war vocational guidance. The tabulations showed that nearly 85% of the men wanted educational and vocational information. Among the areas in which men most desired facts, 29% said they would like some information about the chances of getting a job in some particular kind of work; 26%, what training they would need for the kind of work they would like to do, and 21%, what kind of work they were best fitted for.

TRAINING IN AERONAUTICAL OCCUPATIONS

CIVIL Aeronautics Administration figures show that 96 per cent of colleges and universities in the United States recognize aeronautics as an elective science, and half of these accept it as a laboratory science for college entrance requirements. At least 399 of the institutions of higher education are offering academic work in aviation or related fields, according to an Air Press Service release.

During the school year 1944-1945, aviation courses offered in the colleges and universities ranged from a four-to-five-year study in aeronautical engineering to special summer work for elementary teachers. About half of the pupils in the 28,000 American secondary schools, with a total enrollment of 6,000,000, have access to aviation instruction. An estimated one-sixth of this group will be seniors expected to graduate at the close of the 1945-1946 term, many of whom will follow aviation study in college.

Sixteen states and the District of Columbia, representing more than 50 per cent of the population of the United States, have formulated comprehensive high school aviation programs to meet peacetime needs with the assistance of the Aviation Education Division of the CAA, which is working with other states on similar projects. Certain schools in every state in the union have well-developed programs of aviation education, with varying degrees of support from the state educational authorities.

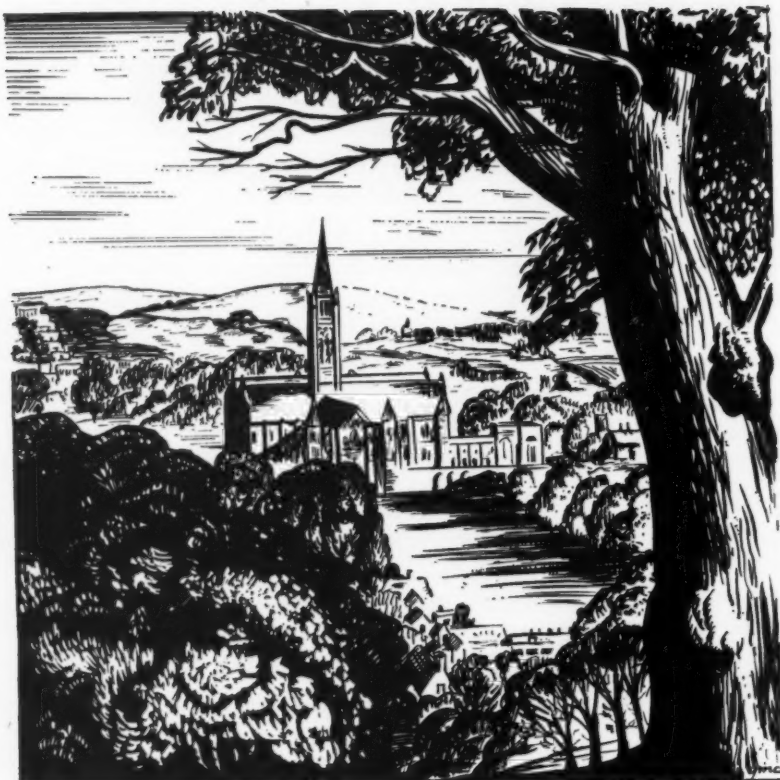
In addition, a majority of the 20,000,000 primary and intermediate grade school pupils in the country will be taught about aviation and its social effects as a method of modernizing their regular studies.

In connection with the secondary school and college aviation education program, more than \$38,000,000 worth of aircraft equipment has been turned over to non-profit schools throughout the United States since October,

1944, in an Army Air Forces project serving as a test operation for the larger education program still to come. An additional large number of obsolete aircraft instruments, engines, and complete airplanes will be made available to schools during the next several months, according to the Air Technical Service Command. The surplus planes and equipment are used in vocational training and aeronautical engineering courses as well as in social study courses in elementary and secondary schools to emphasize the place of aviation in the post-war world.

The list of organizations promoting aviation-education projects includes the Aviation Education Division of the Civil Aeronautics Administration; Air-Age Education Research, sponsored by American Airlines; School and College Service, sponsored by United Air Lines; Air Age Education, Inc.; the Aviation Education Foundation; Civil Air Patrol; Educational Service of Pan-American World Airways; Air Age Education Congress, sponsored by the University of Denver; Civil Air Patrol League; National Aeronautic Association; Boy Scouts of America; Academy of Model Aeronautics; United States Junior Chamber of Commerce; the recently created Air Power League; Aeronautical Training Society; Army Air Forces; Institute of the Aeronautical Sciences; and the Aircraft Industries Association.

Flight scholarships have been established recently by several state and local units of the Civil Air Patrol. Funds are raised by contributions from individuals and business firms interested in promoting aviation education. Financial grants are also being made to colleges and schools by interested persons, groups, and concerns. Recently the Glenn L. Martin Aircraft Company gave \$1,700,000 to the University of Maryland for education and research in aeronautical engineering.



PEACE AND PEACE OF MIND

The world cannot know all the benefits of peace without peace of mind. Until atomic power is effectively controlled, for instance, its fabulous constructive uses will not be fully enjoyed. But with assurance of peace, the hearts and works of men can occupy high places.

In the same way, it is often difficult for a man to make the most of his life if he lacks peace of mind. By helping him obtain financial security, life insurance brings freedom from worry and new energy for the things he wants to accomplish.

Providing peace of mind is the satisfying business of men and women who choose life insurance careers.



THE **Penn Mutual** LIFE INSURANCE COMPANY

JOHN A. STEVENSON, *President*

INDEPENDENCE SQUARE, PHILADELPHIA

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